

# ArchNav:

Windows 8, 10 Installation Guide

## Table of Contents

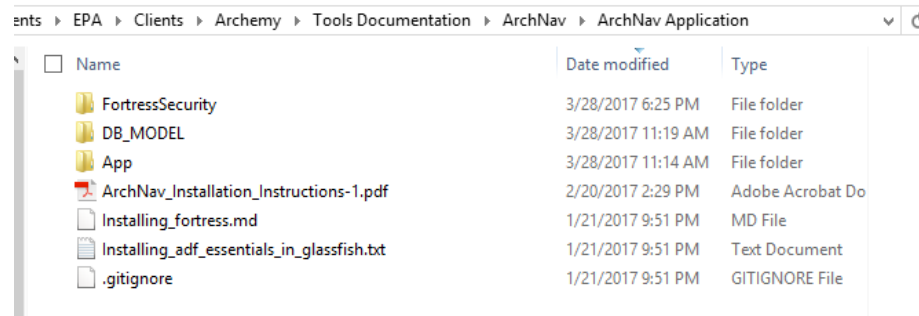
Obtain Application Source Code .....	4
Download App Source (development environment only).....	4
Instantiate MySQL and Application Database .....	5
Create MySQL DB.....	5
Download and Install JDeveloper and Glassfish Extensions .....	9
Obtain and Install JDeveloper (development environment only) .....	9
Add Glassfish Extensions to JDeveloper .....	10
Select project properties.....	10
Deploy Application.....	12
Download, Install and Configure Glassfish .....	14
Install Glassfish .....	14
Add the ADF Essentials to the Glassfish Installation .....	14
Configure Glassfish to handle ADF Applications .....	16
Other Glassfish Configuration Tasks .....	17
Download and Install Maven .....	20
Download and Install Cygwin .....	21
Add wget and git Packages to Cygwin.....	21
Download and Install Fortress .....	23
Download Fortress Software .....	23
Prepare the Fortress Software .....	23
Download and Install ApacheDS .....	25
Configure ApacheDS (which we will use instead of Open LDAP) .....	25
Update conf file to include java location.....	26
Integrate and Test Apache Fortress Core.....	26
Download and Install Apache Directory Studio.....	26
Create an LDAP Connection .....	26
Import ApacheDS Schema.....	29
Integrate Apache Fortress Core and ApacheDS .....	30
Test Apache Fortress Core Integration .....	30
Download and Install Tomcat .....	32
Add users to the Tomcat installation .....	33
Start the Tomcat Server .....	35

Setup Apache Fortress REST Application .....	36
Build, Perform Fortress REST Test Policy Load and Deploy to Tomcat: .....	36
Run Smoke test .....	36
Set Up Fortress Web .....	36
Open browser and test Fortress Manager .....	36
Run Selenium Web Driver Integration Test.....	37
Build and deploy the ArchNav security application .....	38
<b>Build and deploy the ArchNav application</b> .....	39
Configure Fortress to include ArchNav authentication and RBAC details .....	40
Open Browser and Load Fortress Manager.....	40
Create and Edit Fortress Permission Objects and Assign Permissions .....	40
Test ArchNav .....	45

## Obtain Application Source Code

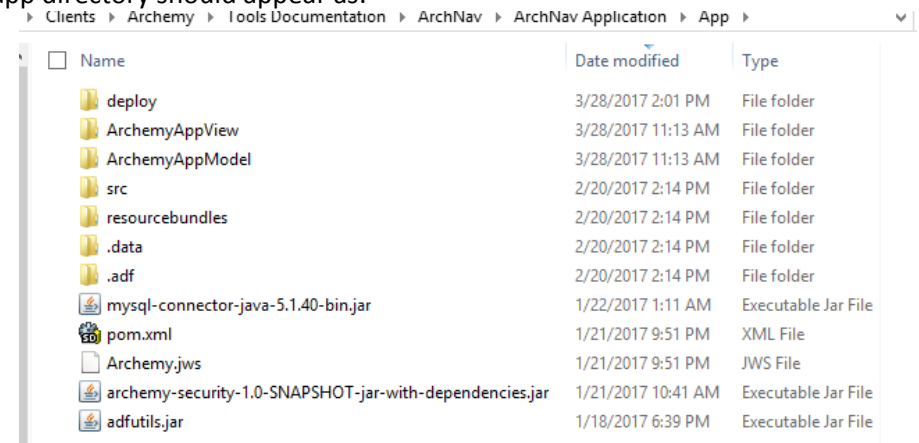
### Download App Source (development environment only)

1. Acquire the application zip file. Unzip into an application directory.
2. The unzipped files should appear as:



Name	Date modified	Type
FortressSecurity	3/28/2017 6:25 PM	File folder
DB_MODEL	3/28/2017 11:19 AM	File folder
App	3/28/2017 11:14 AM	File folder
ArchNav_Installation_Instructions-1.pdf	2/20/2017 2:29 PM	Adobe Acrobat Do
Installing_fortress.md	1/21/2017 9:51 PM	MD File
Installing_adf_essentials_in_glassfish.txt	1/21/2017 9:51 PM	Text Document
.gitignore	1/21/2017 9:51 PM	GITIGNORE File

3. The app directory should appear as:

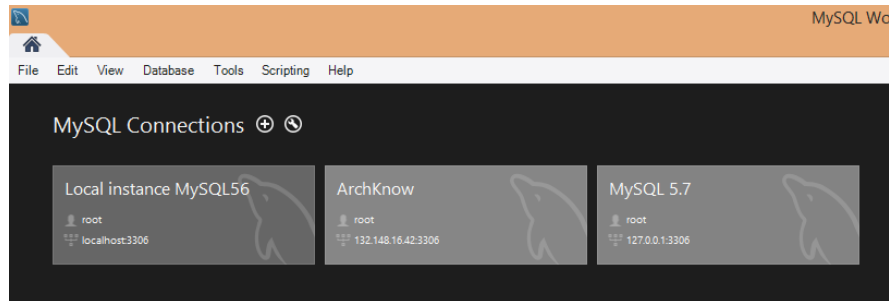


Name	Date modified	Type
deploy	3/28/2017 2:01 PM	File folder
ArchemyAppView	3/28/2017 11:13 AM	File folder
ArchemyAppModel	3/28/2017 11:13 AM	File folder
src	2/20/2017 2:14 PM	File folder
resourcebundles	2/20/2017 2:14 PM	File folder
.data	2/20/2017 2:14 PM	File folder
.adf	2/20/2017 2:14 PM	File folder
mysql-connector-java-5.1.40-bin.jar	1/22/2017 1:11 AM	Executable Jar File
pom.xml	1/21/2017 9:51 PM	XML File
Archemy.jws	1/21/2017 9:51 PM	JWS File
archemy-security-1.0-SNAPSHOT-jar-with-dependencies.jar	1/21/2017 10:41 AM	Executable Jar File
adfutils.jar	1/18/2017 6:39 PM	Executable Jar File

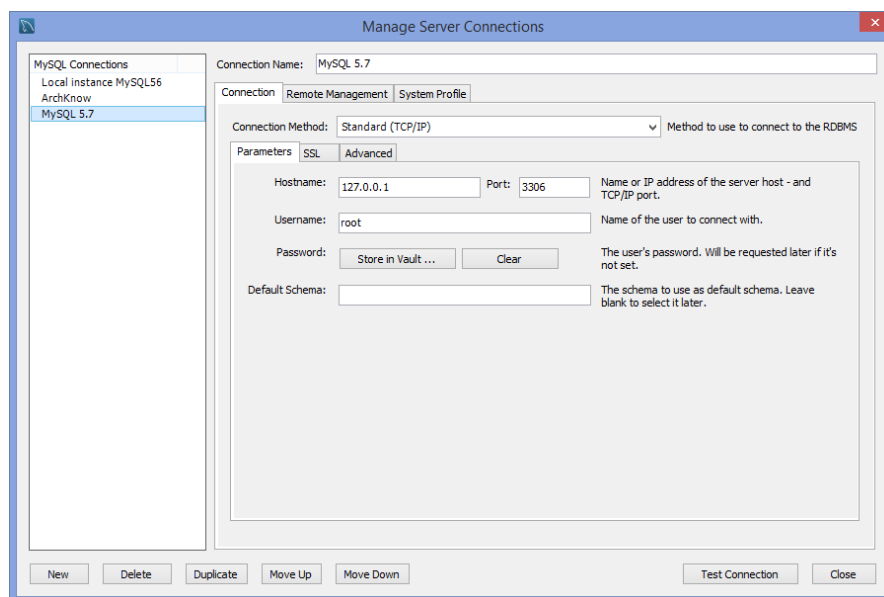
# Instantiate MySQL and Application Database

## Create MySQL DB

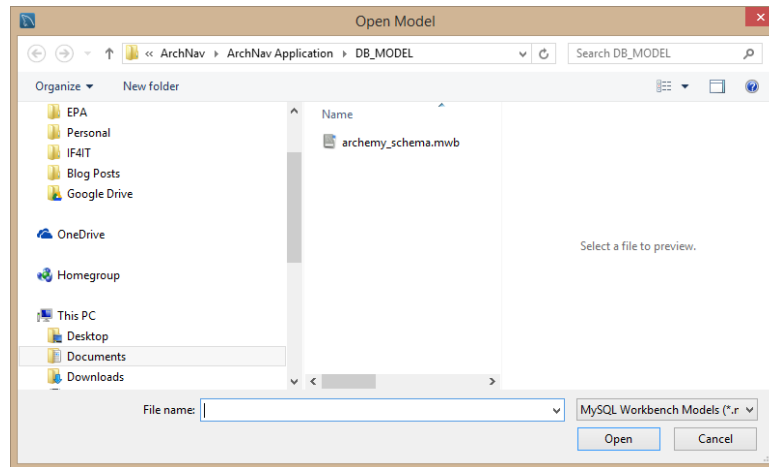
1. Obtain a copy of MySQL v 5.7 and the MySQL workbench v 6.3 from [here](#) and install it.
2. Create a connection to the v5.7 server. Click the + to create a new connection:



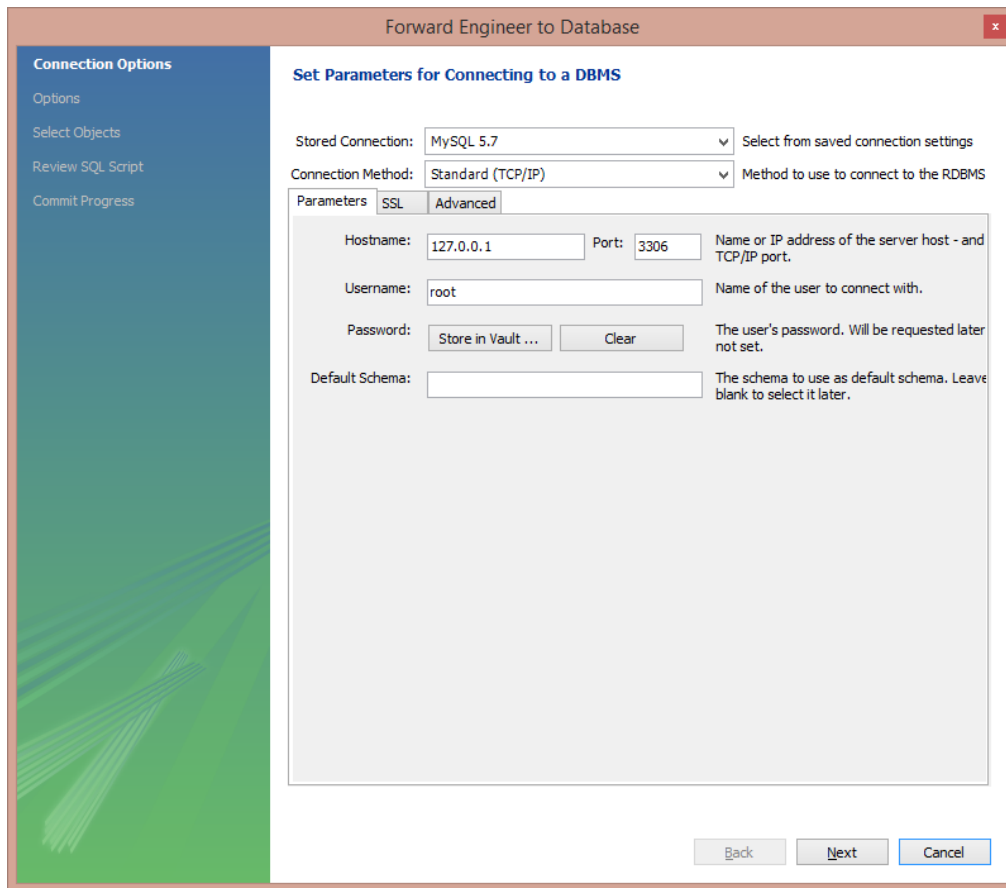
3. If this server is to be local to your development machine, the IP address should be 127.0.0.1, port 3306:



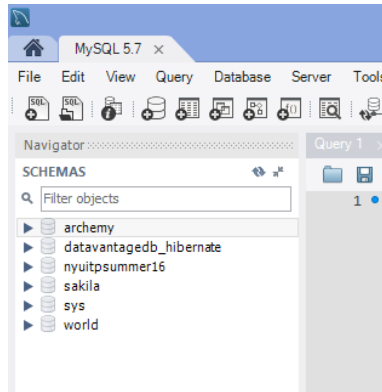
4. Create the MySQL schema 'archemy':
  - a. In the MySQL workbench select File>Open Model
  - b. Locate and select the schema file  
ArchNav Application/DB\_MODEL/archemy\_schema.mwb



- c. The model will open in the workbench.
- d. Select Database>Forward Engineer and follow the prompts to instantiate the schema:



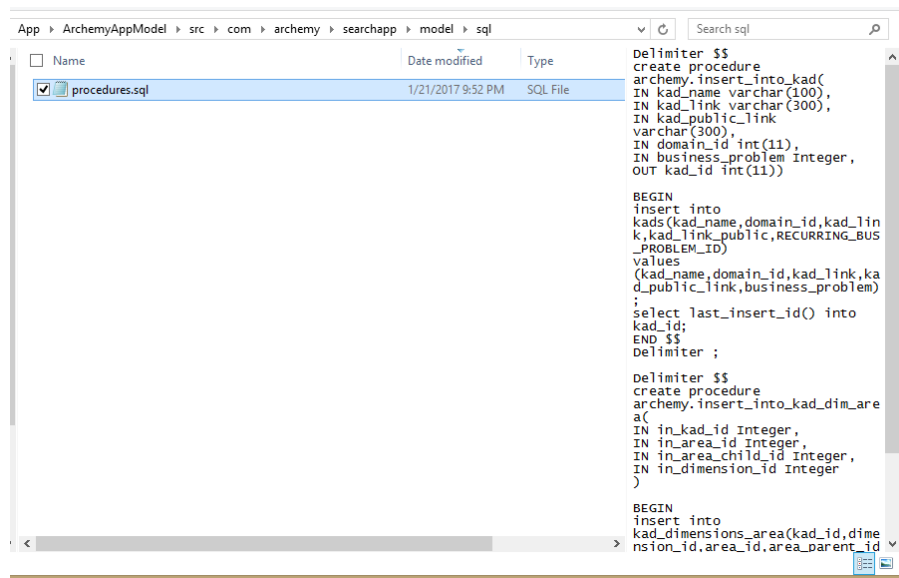
- e. The archemy schema is instantiated:



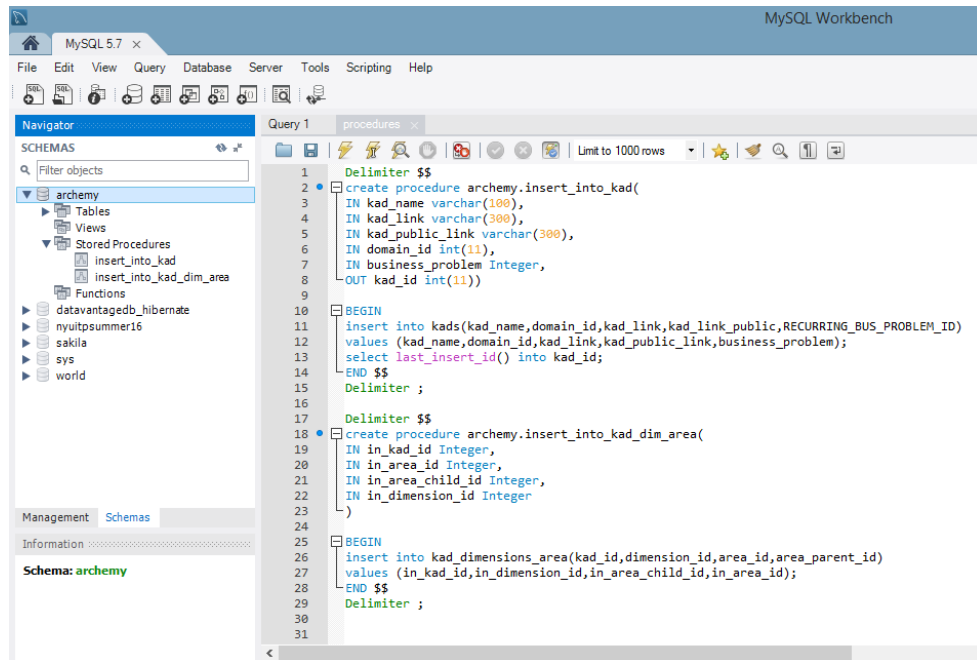
5. Create PL/SQL procedures.

- a. Locate the following file:

App\ArchemyAppModel\src\com\archemy\searchapp\model\sql\procedures.sql



- b. Copy the text to the workbench and execute on the archemy schema.  
c. Two stored procedures will be created:



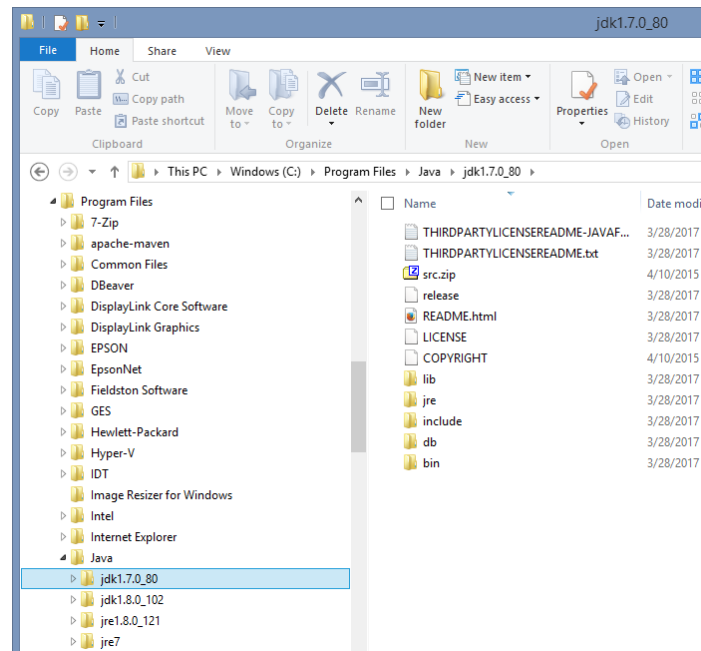
6. Create a user name and password for the schema user that will be used later to configure the data source in glassfish and for the website.
  - a. Select Server>Users and Privileges
  - b. Add Account
  - c. User name: **archemy** and PW: **archemydb1960%**



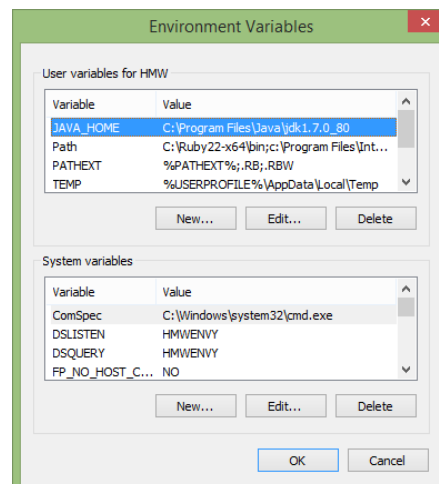
## Download and Install JDeveloper and Glassfish Extensions

### Obtain and Install JDeveloper (development environment only)

1. The product requires java v 1.7.0\_80 and will not work properly with later Java versions. If you have a later Java version installed, you should check your PATH and JAVA\_HOME environment variables to see if they point to the later version. If so, you should:
  - a. Download and install Java version 1.7.0\_80 from Oracle [here](#).
  - b. Unless you specify otherwise, it will be installed here:



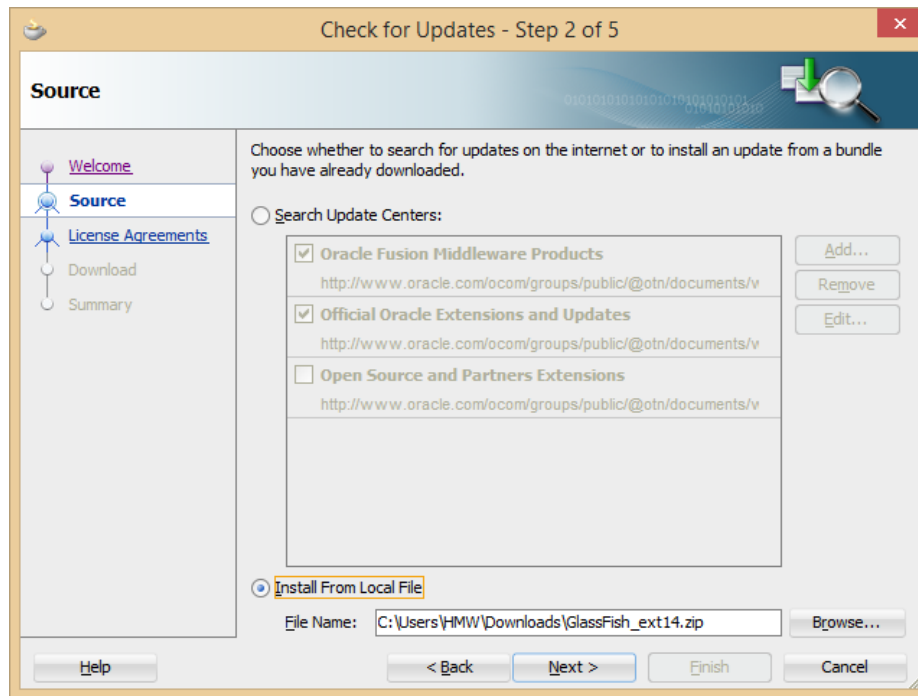
- c. Go to Control Panel> System> Change Settings> System Properties> Advanced> Environment Variables
- d. You'll get an editor that provides access to both User and System Environment Variables:



- e. Edit the User and System JAVA\_HOME and PATH variables to include the path to the Java version 1.7.0\_80.
2. Download the **JDeveloper studio edition v 11.1.2.4.0** from the Oracle website [here](#).  
**N.B., it is important that the version of JDeveloper and the ADF Essentials, which you will install later, are the same. The application will not deploy and operate properly, otherwise.**
3. Run JDeveloper in studio mode and load the workspace: ArchNav\ArchNav Application\AppArchemy.jws

### Add Glassfish Extensions to JDeveloper

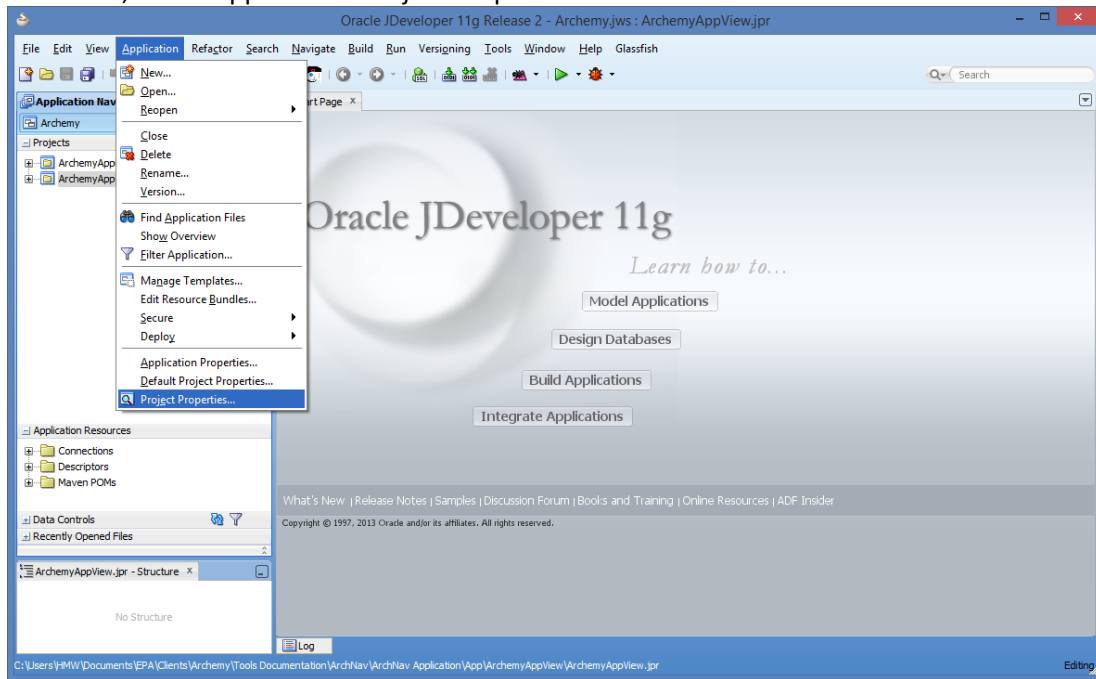
1. Go [here](#) to get the Glassfish extensions and installation instructions.
2. Follow the directions on the page to download and install the extensions.
  - a. If you cannot load the extension from within JDeveloper, there is an alternate option on the blog page to allow you to download the extension and add it to the studio locally.
  - b. Download the extension and then select **HELP>CHECK FOR UPDATES** and click *Install from Local File*



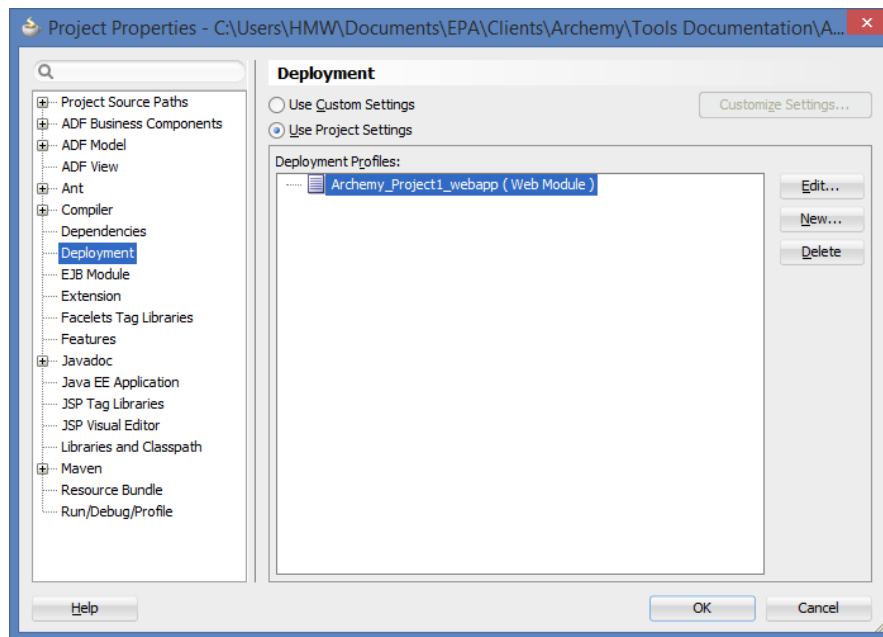
### Select project properties

1. Click on ArchemyAppModel

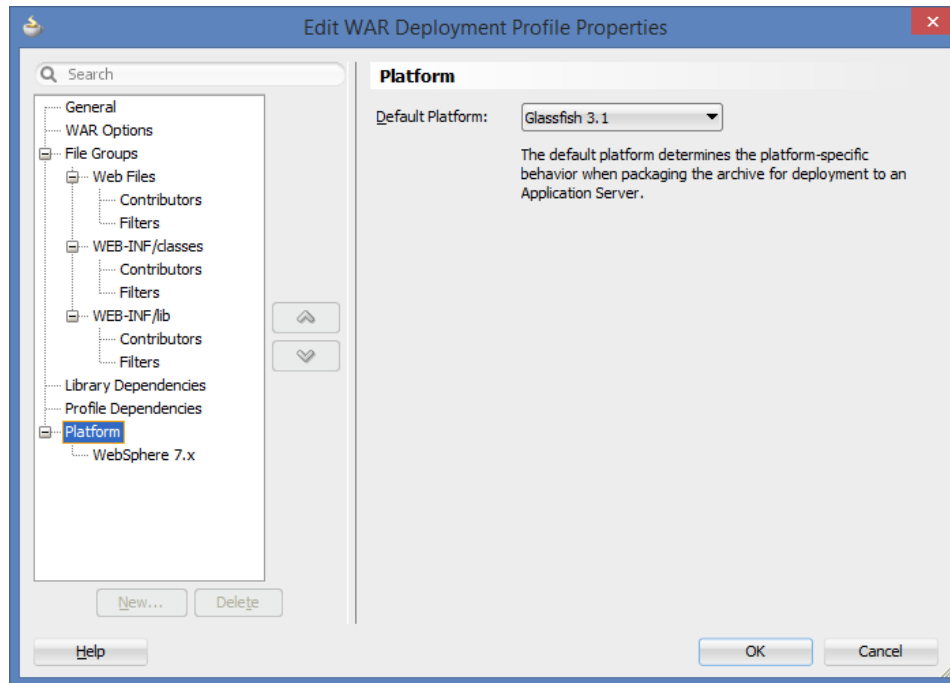
- 
2. In the IDE, select Application>Project Properties



- 
- 
3. Select Deployment
4. **Need some help with what to select. This was already in place when I wrote this doc.**



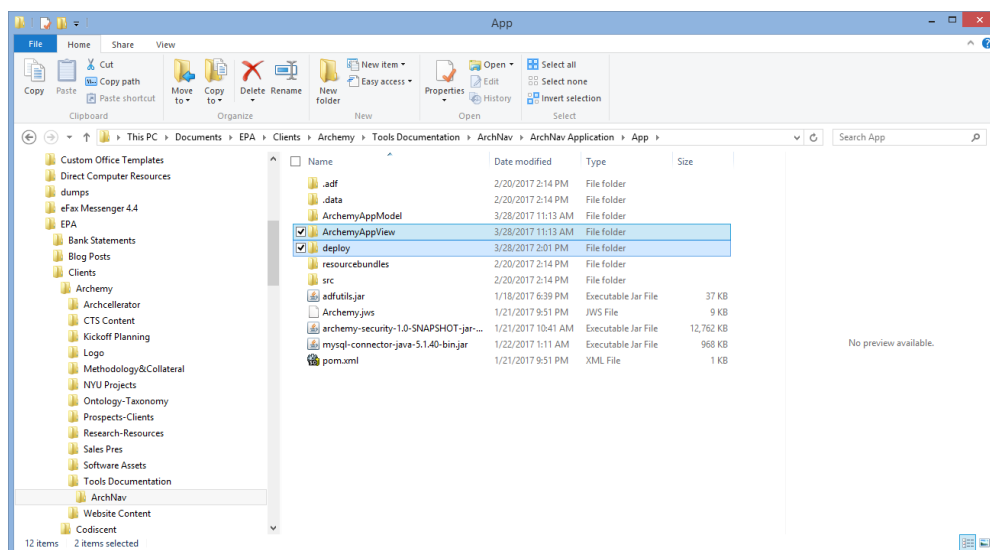
- 
- 
- 
- 
5. **Also need help with this. I don't know how to get here.**

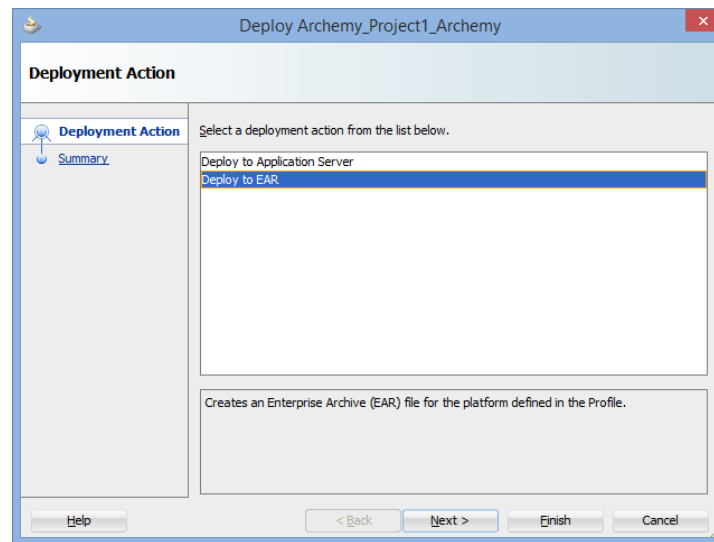


6. In the IDE, click on ArchemyAppModel or ArchemyAppView
7. select Application>Application Properties
8. Repeat the above steps for each

## Deploy Application

Need some help with this



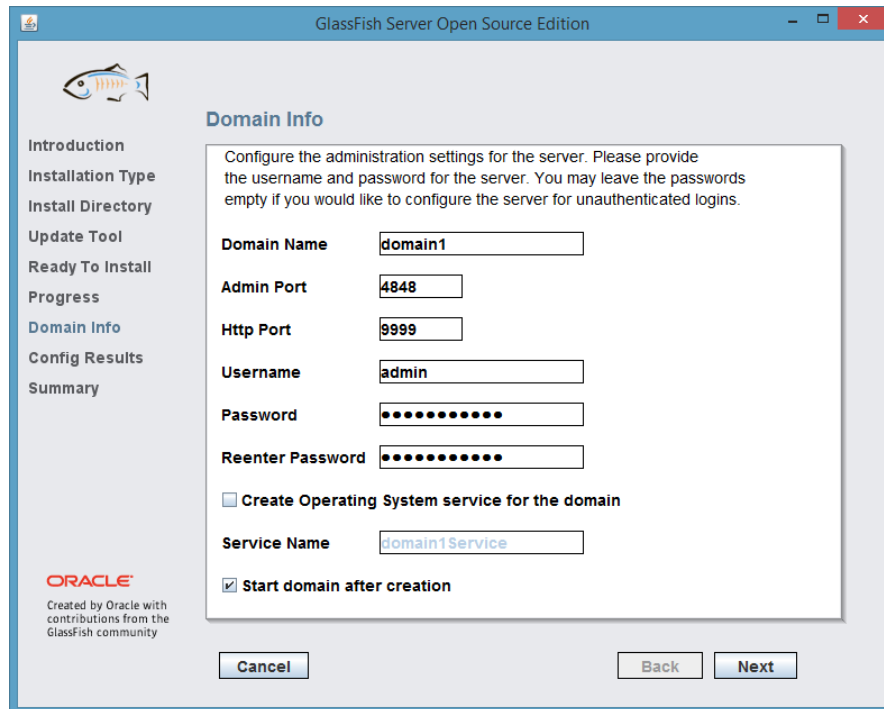


Creates new .war and .ear files

# Download, Install and Configure Glassfish

## Install Glassfish

1. Go [here](#) to obtain a copy of Glassfish. Select [glassfish-3.1.2-windows.exe](#) (EN) and download it.
2. Run the executable to install Glassfish.
3. Set up a domain named domain1 using the parameters shown, below. **N.B., set the listener port to 9999** from the default, which is 8080 and might conflict with other software installed on your machine or server:



The screenshot shows the 'GlassFish Server Open Source Edition' installation window. On the left is a navigation pane with the following items: Introduction, Installation Type, Install Directory, Update Tool, Ready To Install, Progress, Domain Info (highlighted), Config Results, and Summary. The main area is titled 'Domain Info' and contains the following fields and options:

- Domain Name:
- Admin Port:
- Http Port:
- Username:
- Password:
- Reenter Password:
- ☐ Create Operating System service for the domain
- Service Name:
- ☒ Start domain after creation

At the bottom of the window are three buttons: 'Cancel', 'Back', and 'Next'. The Oracle logo and text 'Created by Oracle with contributions from the GlassFish community' are visible in the bottom left corner.

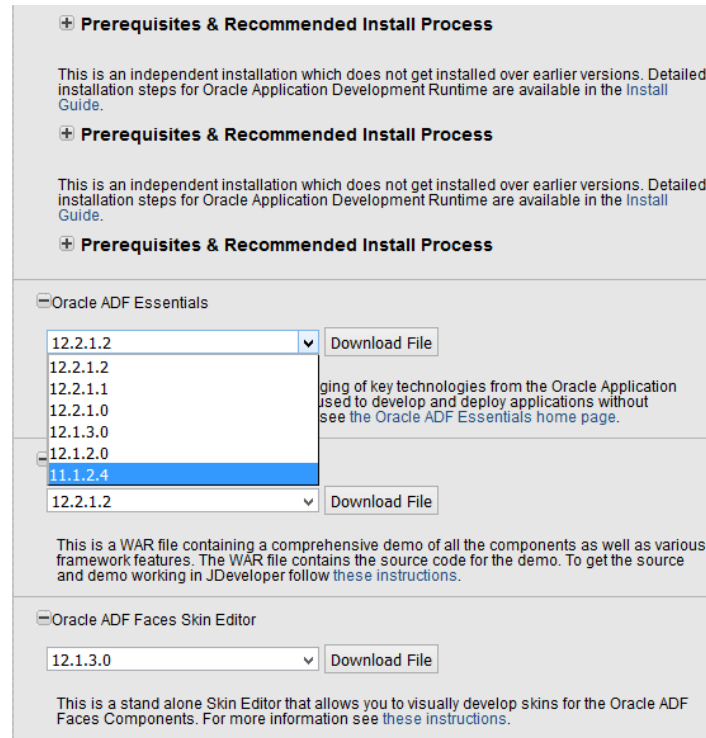
4. Set the Admin PW to: **Claude1960%**

## Add the ADF Essentials to the Glassfish Installation

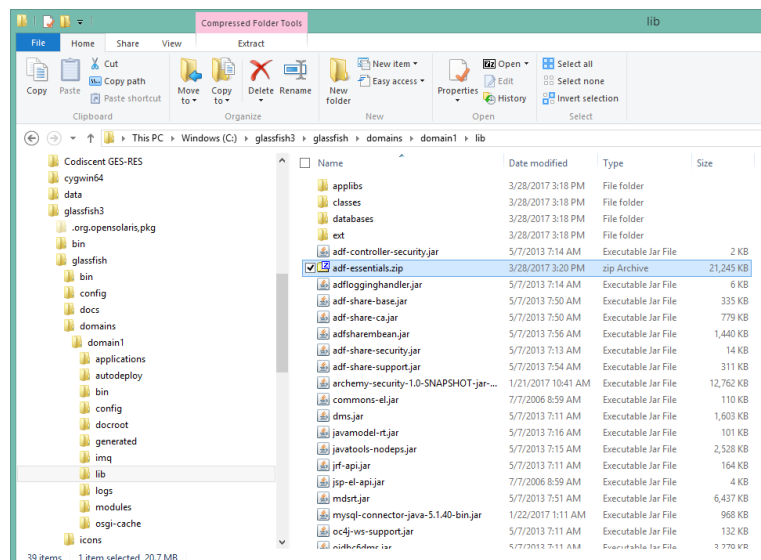
Go [here](#) to review download and installation instructions from the source.

1. Download the Oracle ADF Essentials packaging from [here](#) - this will get you an adf-essentials.zip file.

N.B., it is important that the versions of JDeveloper and the ADF Essentials be the same. The application will not deploy or operate properly, otherwise. Select **v 11.1.2.4** for download from this page:



2. Copy the adf\_essentials.zip to the lib directory of your Glassfish domain - on a default windows install this would be: C:\glassfish3\glassfish\domains\domain1\lib



3. Open a command prompt, cd to the above lib directory and issue a `unzip -j adf_essentials.zip`
4. Copy these two .jar files from the App directory into the `C:\glassfish3\glassfish\domains\domain1\lib` directory also:

Archemy > Tools Documentation > ArchNav > ArchNav Application > App

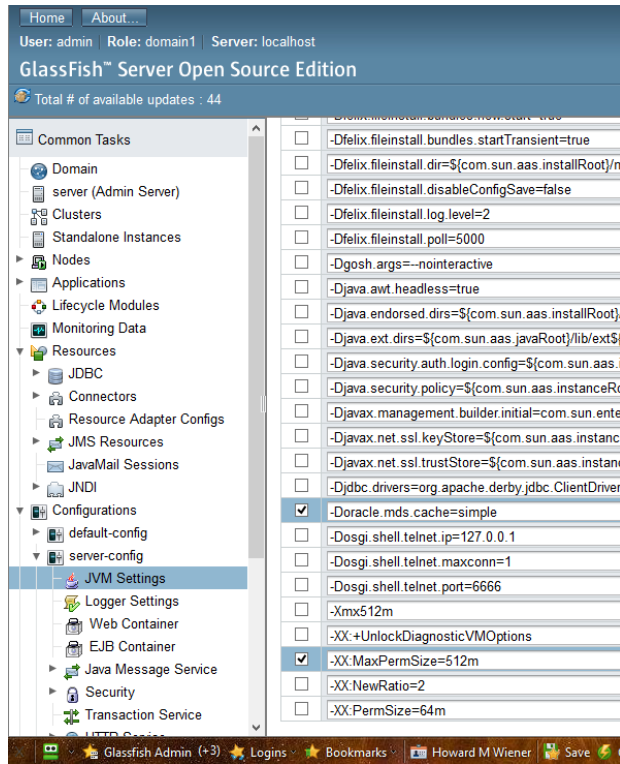
<input type="checkbox"/> Name	Date modified	Type
deploy	3/28/2017 2:01 PM	File
ArchemyAppView	3/28/2017 11:13 AM	File
ArchemyAppModel	3/28/2017 11:13 AM	File
src	2/20/2017 2:14 PM	File
resourcebundles	2/20/2017 2:14 PM	File
.data	2/20/2017 2:14 PM	File
.adf	2/20/2017 2:14 PM	File
mysql-connector-java-5.1.40-bin.jar	1/22/2017 1:11 AM	Executable
pom.xml	1/21/2017 9:51 PM	XML
Archemy.jws	1/21/2017 9:51 PM	Java
<input checked="" type="checkbox"/> archemy-security-1.0-SNAPSHOT-jar-with-dependencies.jar	1/21/2017 10:41 AM	Executable
<input checked="" type="checkbox"/> adfutils.jar	1/18/2017 6:39 PM	Executable

### Configure Glassfish to handle ADF Applications

1. Invoke the admin console of glassfish (<http://localhost:4848>) and log into your admin account.
2. Go to Configurations->Server-config->JVM Settings and choose the JVM Options tab
3. Add the following entries:
  - a. `-XX:MaxPermSize=512m` (note this entry should already exist so just make sure it has a big enough value)
  - b. `-Doracle.mds.cache=simple`

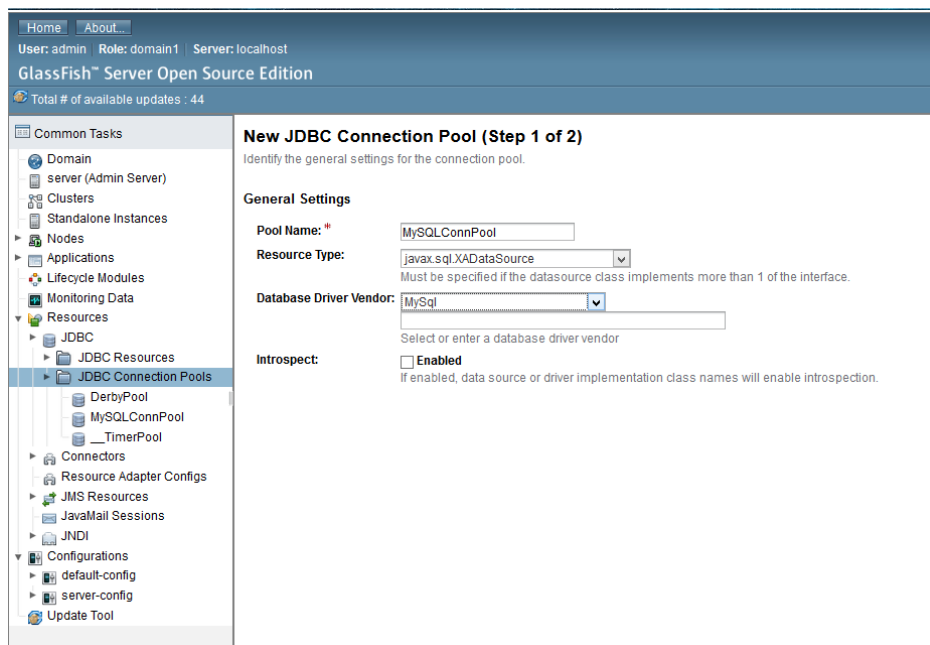
These entries are highlighted, below:





## Other Glassfish Configuration Tasks

1. Go into Resources->JDBC->JDBC Connection Pools and click to create a New one
2. Give it a name and choose the resource type to be javax.sql.XADataSource and choose MySQL as the Database Driver vendor. (MySQLConnPool)



3. Click Next

Home About...

User: admin Role: domain1 Server: localhost

GlassFish™ Server Open Source Edition

Total # of available updates : 44

Common Tasks

- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications
- Lifecycle Modules
- Monitoring Data
- Resources
  - JDBC
    - JDBC Resources
      - JDBC Connection Pools**
        - DerbyPool
        - MySQLConnPool
        - TimerPool
      - Connectors
      - Resource Adapter Configs
      - JMS Resources
      - JavaMail Sessions
      - JNDI
    - Configurations
      - default-config
      - server-config
    - Update Tool

### New JDBC Connection Pool (Step 2 of 2)

Identify the general settings for the connection pool. Datasource Classname or Driver Classname must be specified for the connection pool.

**General Settings**

Pool Name: MySQLConnPool

Resource Type: javax.sql.XADataSource

Database Driver Vendor: MySQL

Datasource Classname: com.mysql.jdbc.jdbc2.optional.MysqlXADataSource

Select or enter vendor-specific classname that implements the DataSource and/or XADataSource APIs

Driver Classname:

Select or enter vendor-specific classname that implements the java.sql.Driver interface.

Ping: ☒ Enabled

When enabled, the pool is pinged during creation or reconfiguration to identify and warn of any erroneous values for its attribut

Description:

**Pool Settings**

Initial and Minimum Pool Size: 8 Connections

Minimum and initial number of connections maintained in the pool

Maximum Pool Size: 32 Connections

Maximum number of connections that can be created to satisfy client requests

Pool Resize Quantity: 2 Connections

Number of connections to be removed when pool idle timeout expires

Idle Timeout: 300 Seconds

Maximum time that connection can remain idle in the pool

Max Wait Time: 60000 Milliseconds

4. Scroll down to the Additional Properties section and start filling in the information for your database. The values for the archemy MySQL DB are shown, below:

Home About...

User: admin Role: domain1 Server: localhost

GlassFish™ Server Open Source Edition

Total # of available updates : 44

Tree

- Common Tasks
- Domain
- server (Admin Server)
- Clusters
- Standalone Instances
- Nodes
- Applications
- Lifecycle Modules
- Monitoring Data
- Resources
  - JDBC
    - JDBC Resources
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        - DemolMySQLPool
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      - Connectors
      - Resource Adapter Configs
      - JMS Resources
      - JavaMail Sessions
      - JNDI
    - Configurations
      - default-config
      - server-config
    - Update Tool

General Advanced **Additional Properties**

### Edit JDBC Connection Pool Properties

Modify properties of an existing JDBC connection pool.

Pool Name: MySQLConnPool

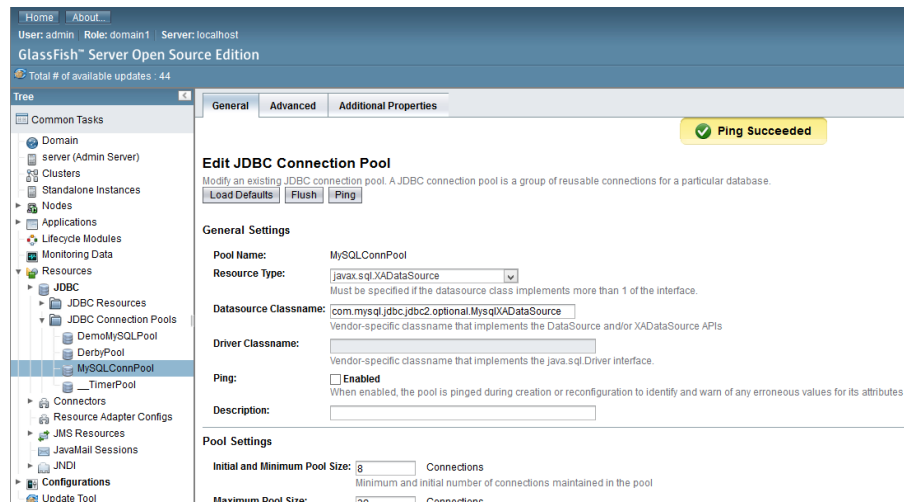
**Additional Properties (5)**

☒ 5 Add Property Delete Properties

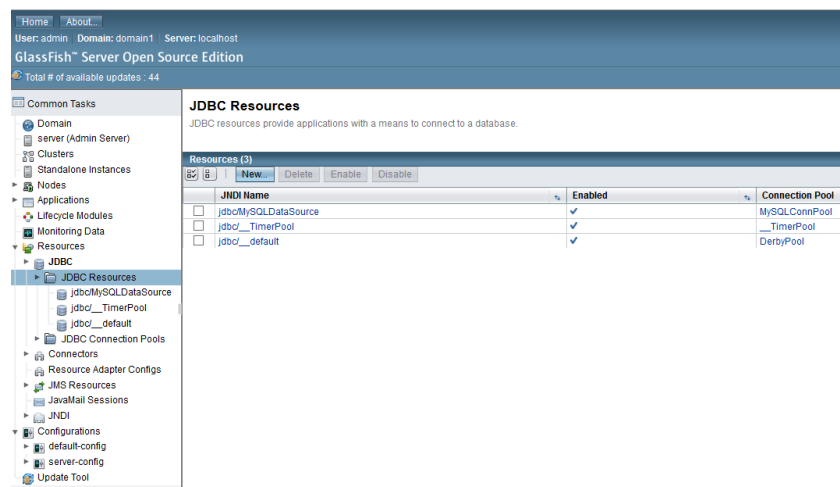
Name	Value
<input type="checkbox"/> portNumber	3306
<input type="checkbox"/> databaseName	archemy
<input type="checkbox"/> serverName	localhost
<input type="checkbox"/> user	archemy
<input type="checkbox"/> password	archemydb1960%

5. Click Finish

- Click Ping to check your connection works.



- Now define a new JDBC Resource that will use the pool you just defined.



- Click on JDBC Resources
- Click New . . .
- Enter **jdbcMySQLDataSource** in the JINDI Name box.
- Select **MySQLConnPool** in the Pool Name dropdown.
- Click OK.

# Download and Install Maven

Go [here](#) and download maven (apache-maven-3.3.9-bin.zip) and install it.

The screenshot shows the Apache Maven Project website for downloading version 3.3.9. The page includes a sidebar with navigation links, a main content area with download instructions, system requirements, and a table of available files.

### Downloading Apache Maven 3.3.9

Apache Maven 3.3.9 is the latest release and recommended version for all users.

The currently selected download mirror is <http://mirror.cogentco.com/pub/apache/>. If you encounter a problem with this mirror, please select another mirror. If all mirrors are failing, there are backup mirrors (at the end of the mirrors list) that should be available. You may also consult the [complete list of mirrors](#).

Other mirrors:  [Change](#)

### System Requirements

Requirement	Details
Java Development Kit (JDK)	Maven 3.3 requires JDK 1.7 or above to execute - it still allows you to build against 1.3 and other JDK versions by <a href="#">Using Toolchains</a>
Memory	No minimum requirement
Disk	Approximately 10MB is required for the Maven installation itself. In addition to that, additional disk space will be used for your local Maven repository. The size of your local repository will vary depending on usage but expect at least 500MB.
Operating System	No minimum requirement. Start up scripts are included as shell scripts and Windows batch files.

### Files

Maven is distributed in several formats for your convenience. Simply pick a ready-made binary distribution archive and follow the [installation instructions](#). Use a source archive if you intend to build Maven yourself.

In order to guard against corrupted downloads/installations, it is highly recommended to [verify the signature](#) of the release bundles against the public [KEYS](#) used by the Apache Maven developers.

	Link	Checksum	Signature
Binary tar.gz archive	<a href="#">apache-maven-3.3.9-bin.tar.gz</a>	<a href="#">apache-maven-3.3.9-bin.tar.gz.md5</a>	<a href="#">apache-maven-3.3.9-bin.tar.gz.asc</a>
Binary zip archive	<a href="#">apache-maven-3.3.9-bin.zip</a>	<a href="#">apache-maven-3.3.9-bin.zip.md5</a>	<a href="#">apache-maven-3.3.9-bin.zip.asc</a>
Source tar.gz archive	<a href="#">apache-maven-3.3.9-src.tar.gz</a>	<a href="#">apache-maven-3.3.9-src.tar.gz.md5</a>	<a href="#">apache-maven-3.3.9-src.tar.gz.asc</a>

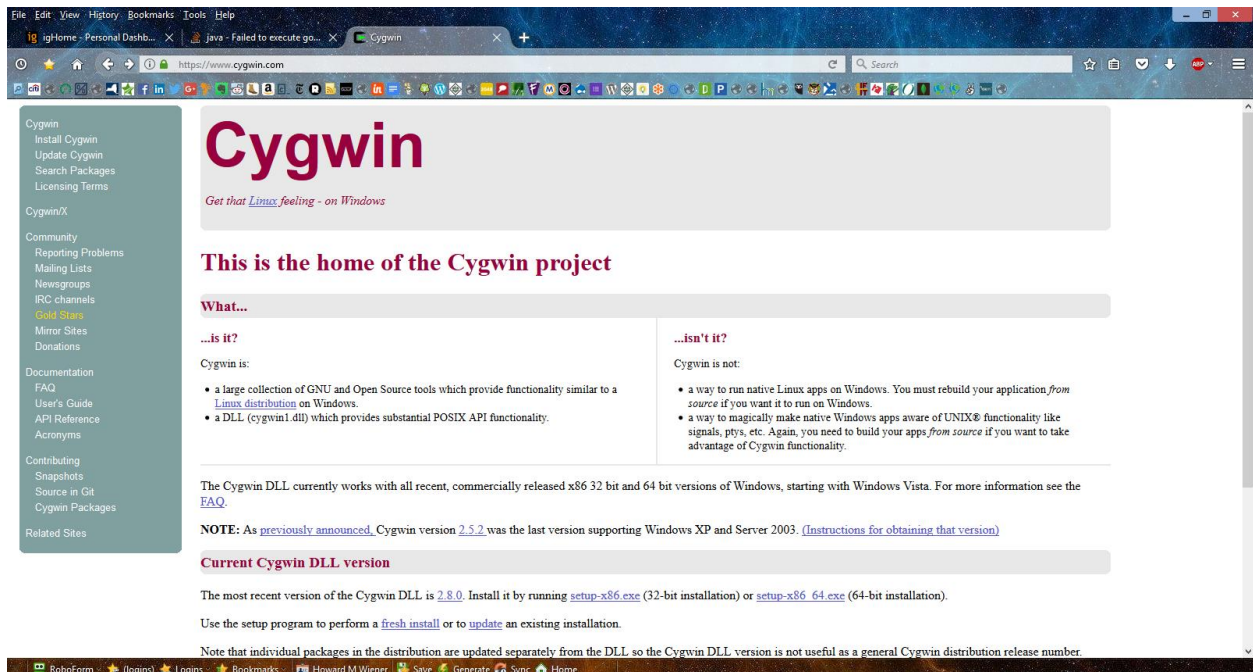
It is a good idea to install Maven in the same directory that you are using for all of the app components:

The screenshot shows a Windows File Explorer window with the address bar set to "Libraries > Documents > Documents > EPA > Clients > Archemy > Tools Documentation > ArchNav". The left sidebar shows the "Favorites" pane with "OneDrive" and "Homegroup" listed. The main pane displays a list of files and folders. The "apache-maven" folder is selected, indicating the intended installation location.

Name	Date modified	Type	Size
Apache Tomcat	4/7/2017 1:10 PM	File folder	
<b>apache-maven</b>	3/28/2017 6:16 PM	File folder	
ArchNav Application	3/28/2017 12:08 PM	File folder	
Archnav DB Schema 20170117	4/7/2017 3:26 PM	File folder	
Fortress	4/7/2017 2:32 PM	File folder	
~\$ndows 8.1 Installation Instructions20170411.docx	4/11/2017 11:59 AM	Microsoft Word Document	1 KB
ADFEssentialsApp.zip	3/28/2017 11:11 AM	zip Archive	237,517 KB
Archemy_ITP_Final_Report.docx	1/6/2017 11:17 AM	Microsoft Word Document	2,022 KB
ArchNav Usability Review and Revision Spec 170302.docx	3/2/2017 10:35 AM	Microsoft Word Document	2,012 KB
ShowcaseKADClassifications170224.xlsx	2/24/2017 2:44 PM	Microsoft Excel Worksheet	14 KB
ShowcaseKADClassifications170228.xlsx	2/28/2017 3:01 PM	Microsoft Excel Worksheet	15 KB
Windows 8.1 Installation Instructions.docx	3/30/2017 11:43 AM	Microsoft Word Document	4,786 KB
Windows 8.1 Installation Instructions20170404.docx	4/5/2017 4:13 PM	Microsoft Word Document	9,686 KB
Windows 8.1 Installation Instructions20170404.pdf	4/5/2017 4:10 PM	Adobe Acrobat Document	3,171 KB
Windows 8.1 Installation Instructions20170407.docx	4/11/2017 11:59 AM	Microsoft Word Document	14,207 KB
Windows 8.1 Installation Instructions20170407.pdf	4/10/2017 8:47 AM	Adobe Acrobat Document	4,375 KB
Windows 8.1 Installation Instructions20170411.docx	4/11/2017 12:20 PM	Microsoft Word Document	14,217 KB
Windows 8.1 Installation Instructions20170411.pdf	4/11/2017 12:04 PM	Adobe Acrobat Document	3,728 KB

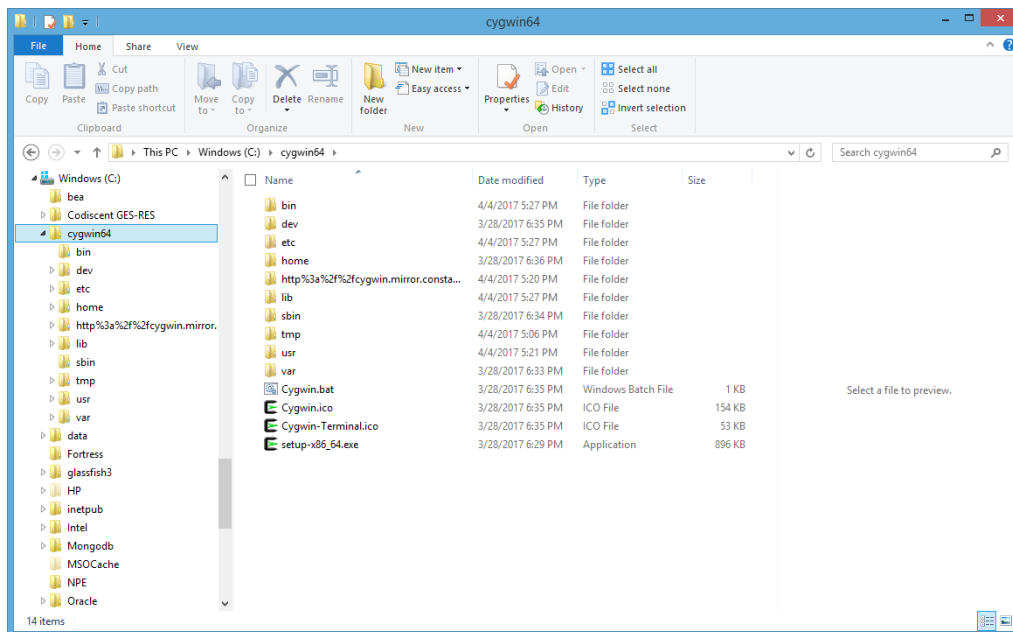
## Download and Install Cygwin

Go [here](#) and download and install Cygwin. This will provide you with a Linux-like interface to perform tasks required for the remaining software:

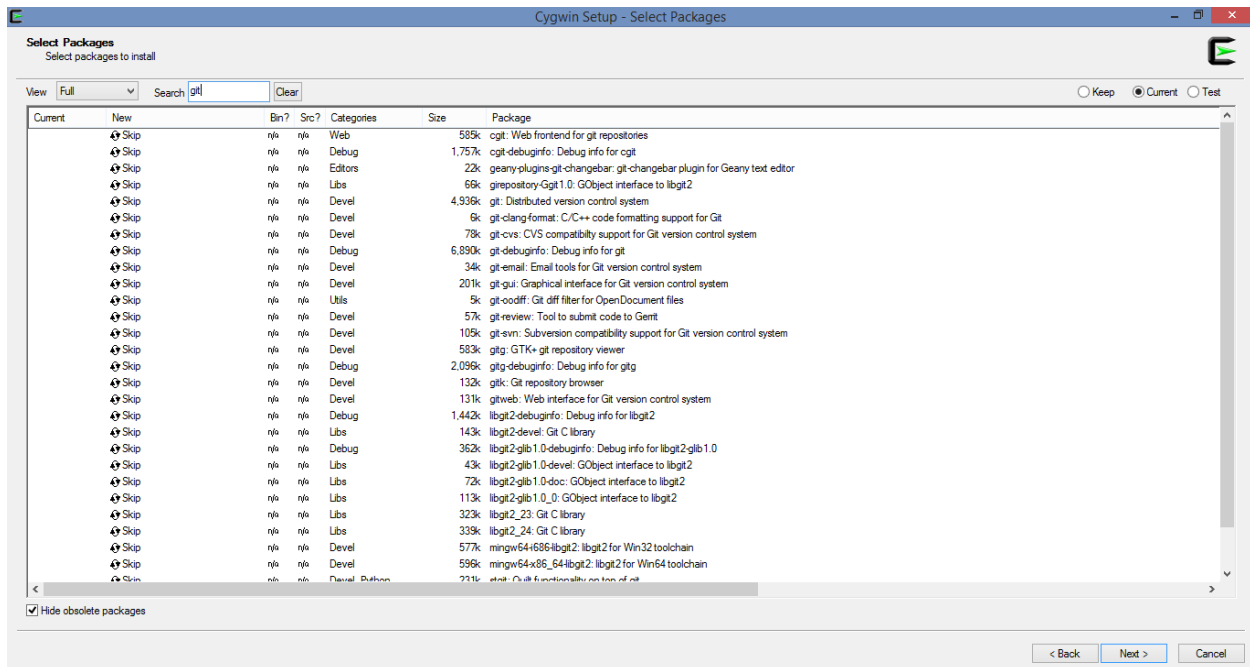


## Add wget and git Packages to Cygwin

You will need to install the wget and git packages. If you did not include them in your initial install, you can go to the directory in which Cygwin is installed and rerun the setup program:



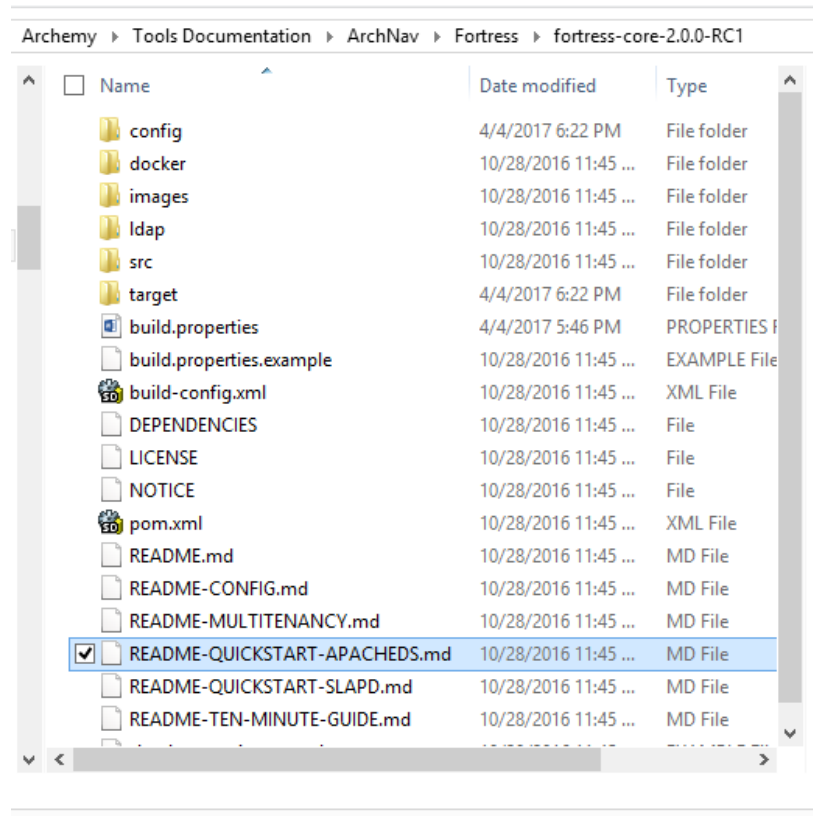
Several steps into the install process you will get to this form:



Use the search bar to find these packages. [N.B., the View dropdown is set to *Pending* by default. Select *Full* to see all available options.] Click on the Skip icon to toggle a package and select it.

## Download and Install Fortress

For reference, there is an instruction document [here](#), a copy of which is located in the fortress-core directory after downloading:



N.B., we are not going to install on Open LDAP. We will be using ApacheDS, instead. Therefore, omit any instructions pertaining to SLAPD.

## Download Fortress Software

From the Fortress home directory issue the following commands:

```
wget http://www.apache.org/dist/directory/fortress/dist/2.0.0-RC1/fortress-core-2.0.0-RC1-source-release.zip
unzip fortress-core-2.0.0-RC1-source-release.zip
cd fortress-core-2.0.0-RC1
```

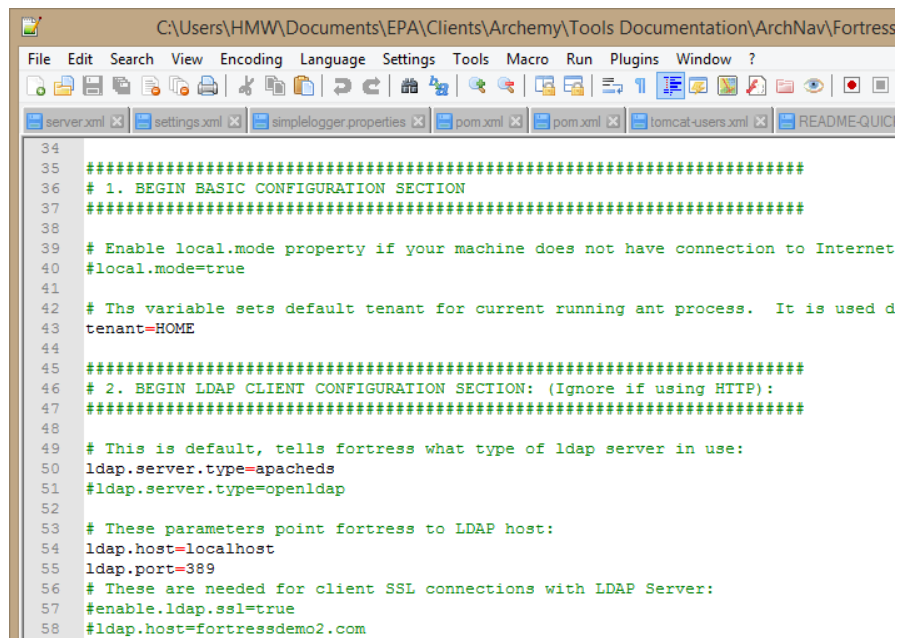
## Prepare the Fortress Software

Copy the example build.properties file to build.properties.

```
cp build.properties.example build.properties
```

Edit the properties file, adding the following three lines:

```
ldap.server.type=apacheds
ldap.host=localhost
ldap.port=389
```



```
34 #####
35 # 1. BEGIN BASIC CONFIGURATION SECTION
36 #####
37 # Enable local.mode property if your machine does not have connection to Internet
38 #local.mode=true
39 # This variable sets default tenant for current running ant process. It is used d
40 tenant=HOME
41 #####
42 # 2. BEGIN LDAP CLIENT CONFIGURATION SECTION: (Ignore if using HTTP):
43 #####
44 # This is default, tells fortress what type of ldap server in use:
45 ldap.server.type=apacheds
46 #ldap.server.type=openldap
47 # These parameters point fortress to LDAP host:
48 ldap.host=localhost
49 ldap.port=389
50 # These are needed for client SSL connections with LDAP Server:
51 #enable.ldap.ssl=true
52 #ldap.host=fortressdemo2.com
```

Omit this step, shown in the documentation:

```
cp slapd.properties.example slapd.properties
```

Run a maven install:

```
mvn install
```

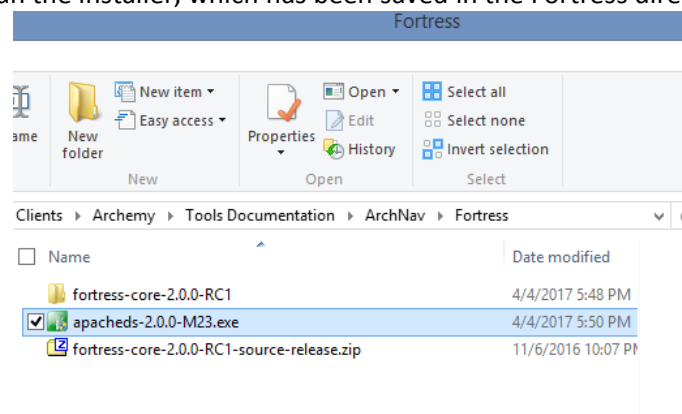


## Download and Install ApacheDS

Go [here](#) and download ApacheDS:

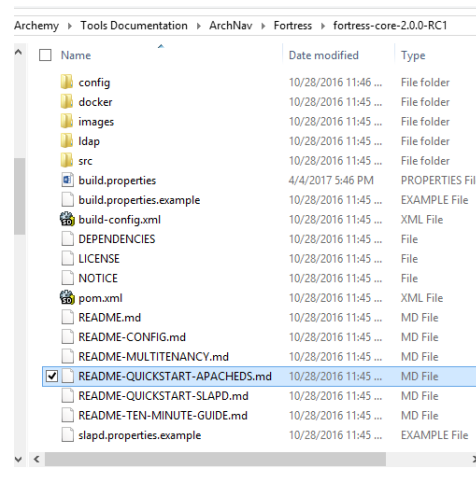


Install the software—run the installer, which has been saved in the Fortress directory.



Configure ApacheDS (which we will use instead of Open LDAP)

Instructions for this installation are contained in the highlighted file, below:

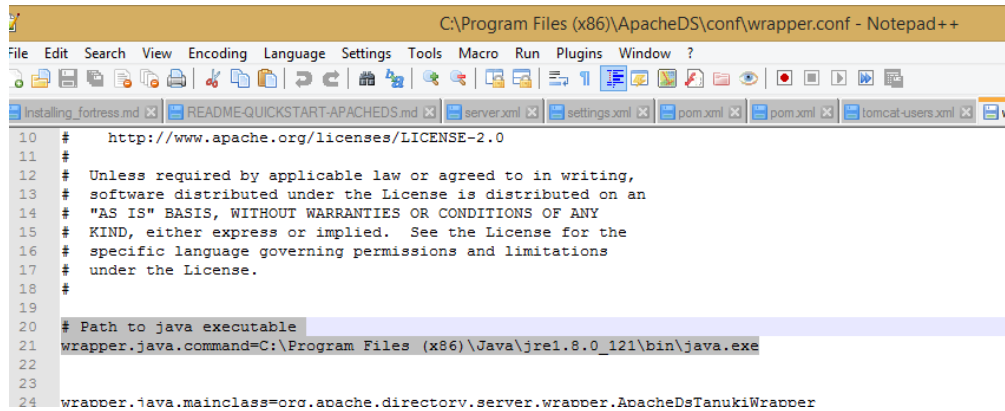


Starting from Step 3 in the document:

Update conf file to include java location

Go to C:\Program Files (x86)\ApacheDS\conf and edit wrapper.conf.

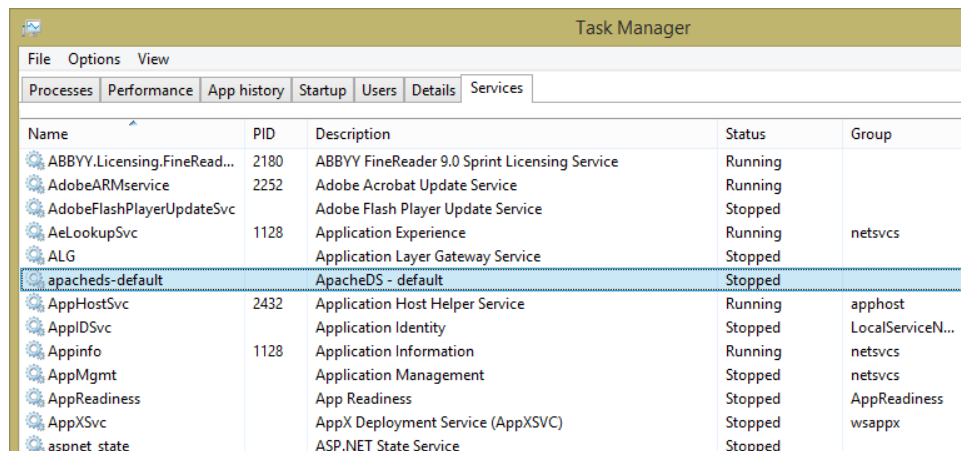
Add the location of your instance of java:



```
10 # http://www.apache.org/licenses/LICENSE-2.0
11 #
12 # Unless required by applicable law or agreed to in writing,
13 # software distributed under the License is distributed on an
14 # "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY
15 # KIND, either express or implied. See the License for the
16 # specific language governing permissions and limitations
17 # under the License.
18 #
19
20 # Path to java executable
21 wrapper.java.command=C:\Program Files (x86)\Java\jre1.8.0_121\bin\java.exe
22
23
24 wrapper.java.mainclass=org.apache.directory.server.wrapper.ApacheDsTanukiWrapper
```

Save and close the file.

Start the ApacheDS instance using the Windows Task Manager interface:



Task Manager				
File Options View				
Processes Performance App history Startup Users Details Services				
Name	PID	Description	Status	Group
ABBYY.Licensing.FineRead...	2180	ABBYY FineReader 9.0 Sprint Licensing Service	Running	
AdobeARMSvc	2252	Adobe Acrobat Update Service	Running	
AdobeFlashPlayerUpdateSvc		Adobe Flash Player Update Service	Stopped	
AeLookupSvc	1128	Application Experience	Running	netsvcs
ALG		Application Layer Gateway Service	Stopped	
apacheds-default		ApacheDS - default	Stopped	
AppHostSvc	2432	Application Host Helper Service	Running	apphost
AppIDSvc		Application Identity	Stopped	LocalServiceN...
Appinfo	1128	Application Information	Running	netsvcs
AppMgmt		Application Management	Stopped	netsvcs
AppReadiness		App Readiness	Stopped	AppReadiness
AppXSvc		AppX Deployment Service (AppXSVC)	Stopped	wsappx
aspnet_state		ASP.NET State Service	Stopped	

## Integrate and Test Apache Fortress Core

Download and Install Apache Directory Studio

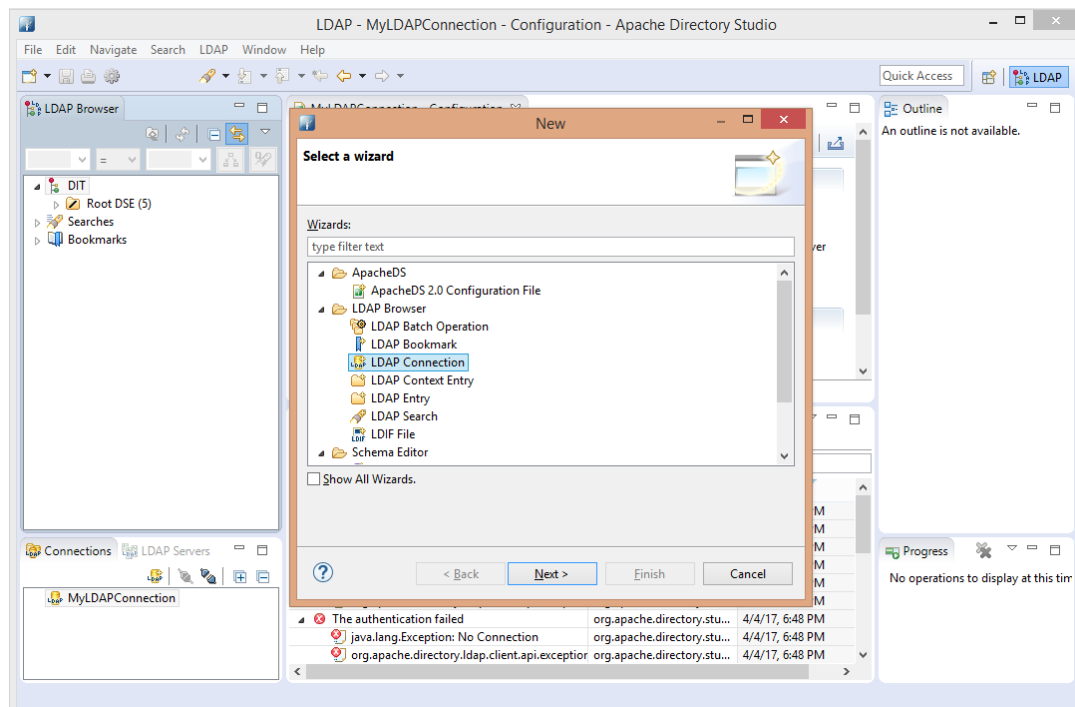
Go [here](#) to obtain the studio and run the install.

Create an LDAP Connection

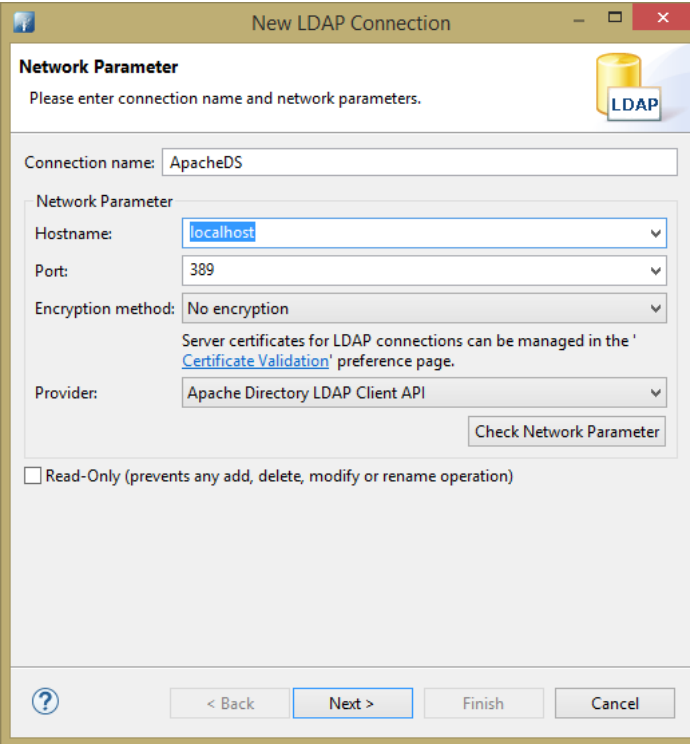
Start up the studio:



Select File>New>LDAP Connection:



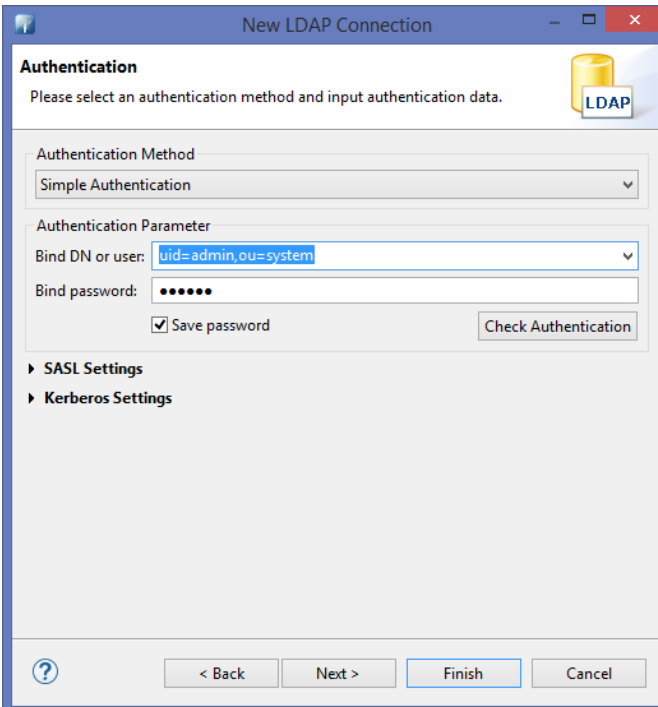
Enter the connection parameters:



The 'New LDAP Connection' dialog box, 'Network Parameter' tab. It contains the following fields and options:

- Connection name: ApacheDS
- Network Parameter section:
  - Hostname: localhost
  - Port: 389
  - Encryption method: No encryption
  - Provider: Apache Directory LDAP Client API
- A link: 'Server certificates for LDAP connections can be managed in the [Certificate Validation](#) preference page.'
- Check Network Parameter button
- ☐ Read-Only (prevents any add, delete, modify or rename operation)
- Navigation buttons: < Back, Next >, Finish, Cancel

Click Next> and enter the authentication parameters:



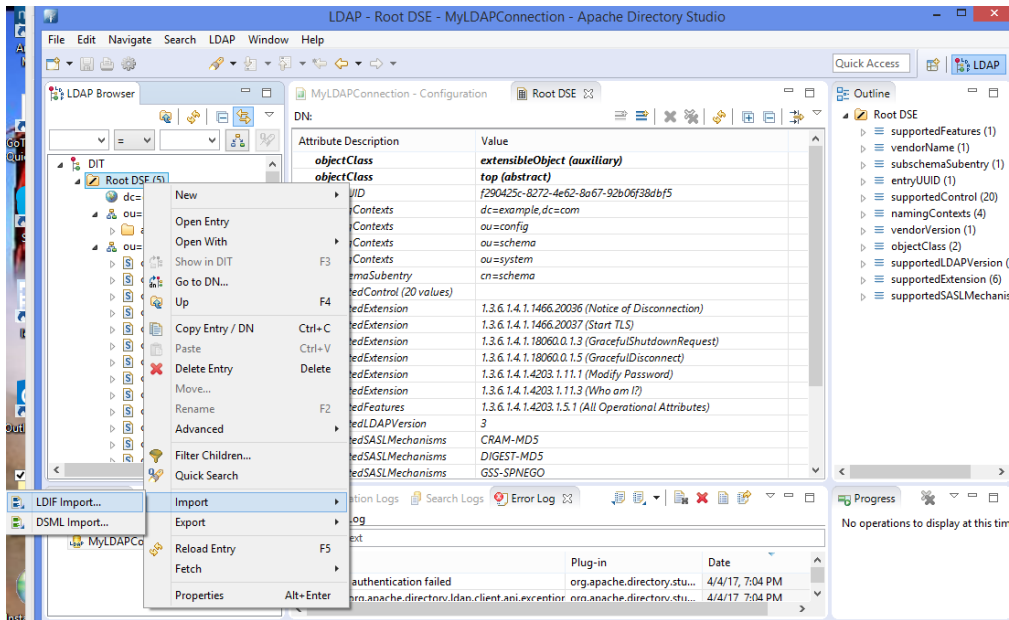
The 'New LDAP Connection' dialog box, 'Authentication' tab. It contains the following fields and options:

- Authentication Method: Simple Authentication
- Authentication Parameter section:
  - Bind DN or user: uid=admin,ou=system
  - Bind password: (masked with dots)
  - ☒ Save password
- Check Authentication button
- Expandable sections: SASL Settings, Kerberos Settings
- Navigation buttons: < Back, Next >, Finish, Cancel

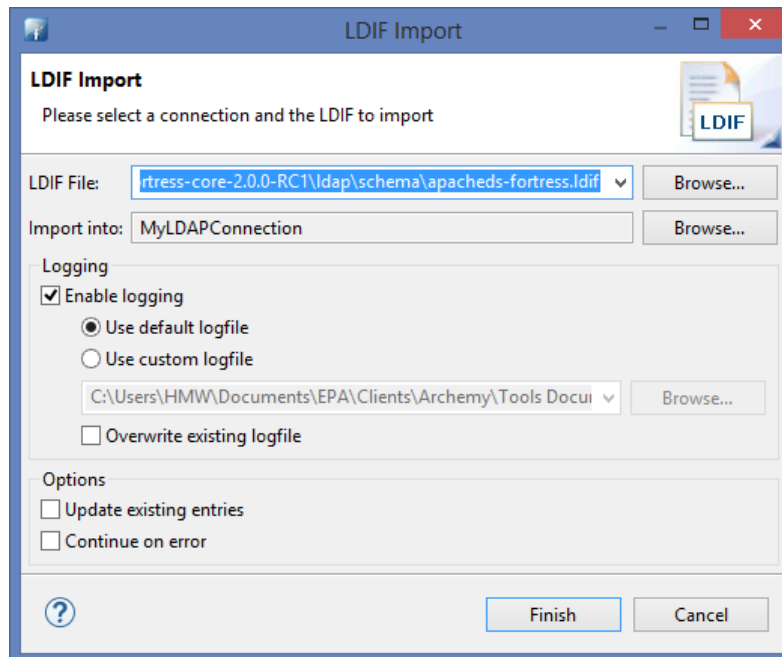
The password is 'secret.'

## Import ApacheDS Schema

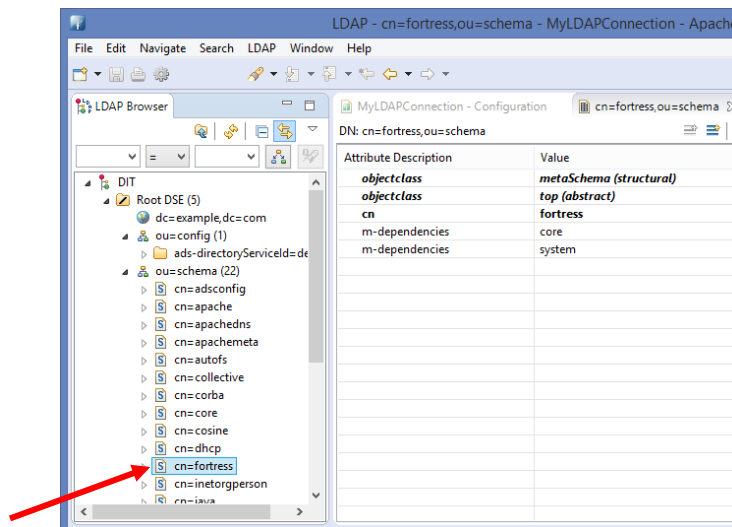
Right click on the Root DSE entry and select *LDIF Import*:



Select the LDIF file. . . \fortress-core-2.0.0-RC1\ldap\schema\apacheds-fortress.ldif from your fortress-core directory and import into the connection you created in the previous step:



The appearance of the fortress schema in the list will indicate a successful import:



## Integrate Apache Fortress Core and ApacheDS

From your fortress-core base folder, execute the following command:

```
mvn install -Dload.file=./ldap/setup/refreshLDAPData.xml
```

Make a backup copy of pom.xml and then edit it. Find and change the **jgrapht-core** version to **0.9.2** (for jdk 7.x compatibility):

```
116 <version.javac.api>1.6</version.javac.api>
117 <version.javax.ws.rs-api>2.0.1</version.javax.ws.rs-api>
118 <version.jaxb>2.2.11</version.jaxb>
119 <version.jgrapht-core>0.9.2</version.jgrapht-core>
120 <version.jmeter.core>2.11</version.jmeter.core>
121 <version.jmeter.java>2.11</version.jmeter.java>
122 <version.junit>4.12</version.junit>
```

Then execute the following:

```
mvn install -Dload.file=./ldap/setup/DelegatedAdminManagerLoad.xml
```

## Test Apache Fortress Core Integration

From your fortress-core base folder, execute the following command:

```
mvn -Dtest=FortressJUnitTest test
```

A successful test run will end with:

```
Tests run: 97, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 372.708 sec - in org.apache.dire

Results :

Tests run: 97, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-antrun-plugin:1.8:run (default) @ fortress-core ---
[INFO] Executing tasks

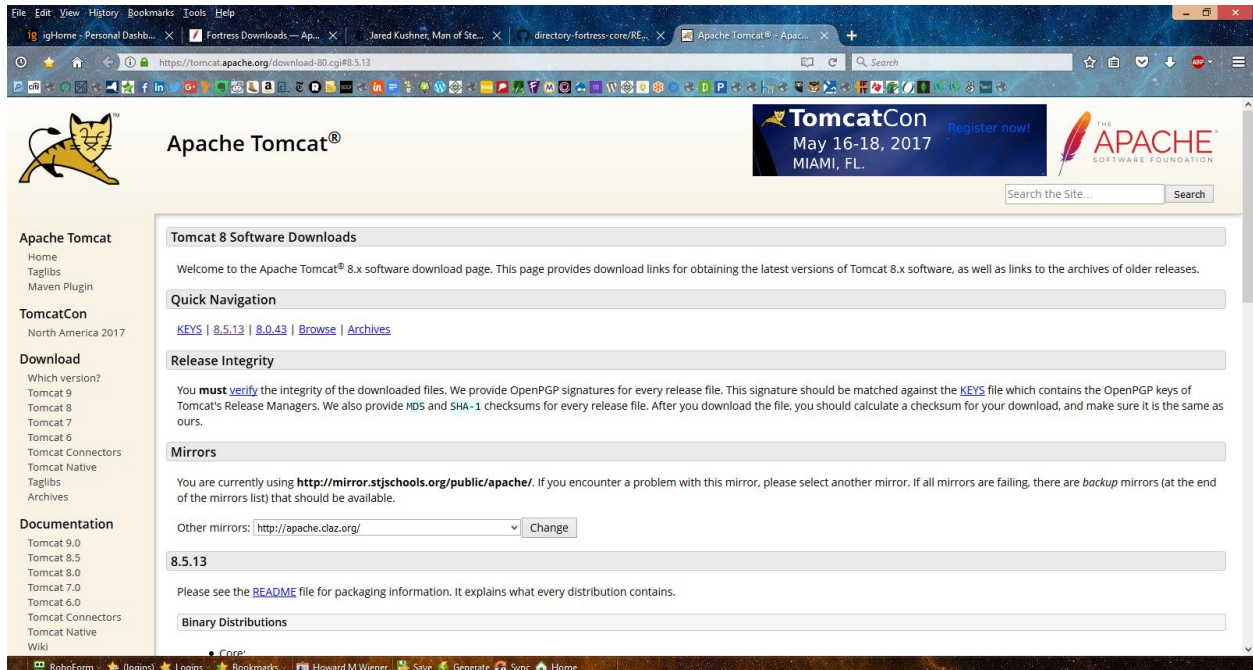
fortress-load:
[INFO] Executed tasks
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 6:21.897s
[INFO] Finished at: Sun Mar 27 14:52:13 UTC 2016
[INFO] Final Memory: 31M/356M
```

Rerun the same command to verify that the teardown APIs are working properly:  
`mvn -Dtest=FortressJUnitTest test`

Success will result in the same output with a larger number of tests run.

## Download and Install Tomcat

Go [here](#) and select the 32 or 64 bit windows zip file. It is recommended that you download version 8.5.11 from the archive.



Select a directory and unzip the contents of the file. You can put them anywhere but we have put them in a subdirectory of our software directory.

In CygWin

Go to the Fortress Directory and Execute

wget <http://repo.maven.apache.org/maven2/org/apache/directory/fortress/fortress-realm-proxy/2.0.0-RC1/fortress-realm-proxy-2.0.0-RC1.jar>

The .jar file fortress-realm-proxy-2.0.0-RC1.jar will be created. Move it to the **lib** directory of your Apache Tomcat installation:



nents > EPA > Clients > Archemy > Tools Documentation > ArchNav > Apache Tomcat > lib				
<input type="checkbox"/> Name	Date modified	Type	Size	
annotations-api.jar	3/27/2017 3:25 PM	Executable Jar File	18 KB	
catalina.jar	3/27/2017 3:25 PM	Executable Jar File	1,566 KB	
catalina-ant.jar	3/27/2017 3:25 PM	Executable Jar File	52 KB	
catalina-ha.jar	3/27/2017 3:25 PM	Executable Jar File	116 KB	
catalina-storeconfig.jar	3/27/2017 3:25 PM	Executable Jar File	73 KB	
catalina-tribes.jar	3/27/2017 3:25 PM	Executable Jar File	263 KB	
ecj-4.6.1.jar	3/27/2017 3:25 PM	Executable Jar File	2,384 KB	
el-api.jar	3/27/2017 3:25 PM	Executable Jar File	80 KB	
<input checked="" type="checkbox"/> fortress-realm-proxy-2.0.0-RC1.jar	11/2/2016 4:15 PM	Executable Jar File	15 KB	
jasper.jar	3/27/2017 3:25 PM	Executable Jar File	576 KB	
jasper-el.jar	3/27/2017 3:25 PM	Executable Jar File	160 KB	
jaspic-api.jar	3/27/2017 3:25 PM	Executable Jar File	27 KB	
jsp-api.jar	3/27/2017 3:25 PM	Executable Jar File	61 KB	
servlet-api.jar	3/27/2017 3:25 PM	Executable Jar File	239 KB	

## Add users to the Tomcat installation

Edit the tomcat-users.xml file:

s > EPA > Clients > Archemy > Tools Documentation > ArchNav > Apache Tomcat > conf				
<input type="checkbox"/> Name	Date modified	Type	Size	
Catalina	4/4/2017 9:18 PM	File folder		
catalina.policy	3/27/2017 3:25 PM	POLICY File	13 KB	
catalina.properties	3/27/2017 3:25 PM	PROPERTIES File	8 KB	
context.xml	3/27/2017 3:25 PM	XML File	2 KB	
jaspic-providers.xml	3/27/2017 3:25 PM	XML File	2 KB	
jaspic-providers.xsd	3/27/2017 3:25 PM	XSD File	3 KB	
logging.properties	3/27/2017 3:25 PM	PROPERTIES File	4 KB	
server.xml	3/27/2017 3:25 PM	XML File	8 KB	
<input checked="" type="checkbox"/> tomcat-users.xml	4/4/2017 9:00 PM	XML File	3 KB	
tomcat-users.xsd	3/27/2017 3:25 PM	XSD File	3 KB	
web.xml	3/27/2017 3:25 PM	XML File	169 KB	

Add the following users to the xml file:

```
<role rolename="manager-script"/>
<role rolename="manager-gui"/>
<user username="tcmanager" password="m@nager123" roles="manager-script"/>
<user username="tcmanagergui" password="m@nager123" roles="manager-gui"/>
```

```

tomcat-users.xml - Notepad
File Edit Format View Help

    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://tomcat.apache.org/xml tomcat-users.xsd"
    version="1.0">
<!--
    NOTE: By default, no user is included in the "manager-gui" role required
    to operate the "/manager/html" web application. If you wish to use this app,
    you must define such a user - the username and password are arbitrary. It is
    strongly recommended that you do NOT use one of the users in the commented out
    section below since they are intended for use with the examples web
    application.
-->
<!--
    NOTE: The sample user and role entries below are intended for use with the
    examples web application. They are wrapped in a comment and thus are ignored
    when reading this file. If you wish to configure these users for use with the
    examples web application, do not forget to remove the <!-- ...> that surrounds
    them. You will also need to set the passwords to something appropriate.
-->
    <role rolename="manager-script"/>
    <role rolename="manager-gui"/>
    <user username="tcmanager" password="m@nager123" roles="manager-script"/>
    <user username="tcmanagergui" password="m@nager123" roles="manager-gui"/>
<!--
    <role rolename="tomcat"/>
    <role rolename="role1"/>
    <user username="tomcat" password="<must-be-changed>" roles="tomcat"/>
    <user username="both" password="<must-be-changed>" roles="tomcat,role1"/>
    <user username="role1" password="<must-be-changed>" roles="role1"/>
-->
</tomcat-users>

```

Update the LDAP Server Coordinates in the Tomcat Startup script:

Edit *catalina.sh* and add the lines, below, to the file in the location shown:

```

# Target LDAP server coordinates
JAVA_OPTS="$JAVA_OPTS -Dfortress.admin.user=uid=admin,ou=system -
Dfortress.admin.pw=secret -Dfortress.config.root=ou=Config,dc=example,dc=com -
Dfortress.port=389"

```

```

Installing fortress.md | READMEQUICKSTART-APACHEDS.md | pom.xml | pom.xml | wrapper.conf | build.properties | READMEQUICKSTART
244 | # Do this here so custom URL handles (specifically 'war:...') can be used in the security policy
245 | JAVA_OPTS="$JAVA_OPTS -Djava.protocol.handler.pkgs=org.apache.catalina.webresources"
246 |
247 | # Set juli LogManager config file if it is present and an override has not been issued
248 | if [ -z "$LOGGING_CONFIG" ]; then
249 |     if [ -f "$CATALINA_BASE/conf/logging.properties" ]; then
250 |         LOGGING_CONFIG="-Djava.util.logging.config.file=$CATALINA_BASE/conf/logging.properties"
251 |     else
252 |         # Bugzilla 45585
253 |         LOGGING_CONFIG="-Dnop"
254 |     fi
255 | fi
256 |
257 | if [ -z "$LOGGING_MANAGER" ]; then
258 |     LOGGING_MANAGER="-Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager"
259 | fi
260 |
261 | # Set UMASK unless it has been overridden
262 | if [ -z "$UMASK" ]; then
263 |     UMASK="0027"
264 | fi
265 | umask $UMASK
266 |
267 | # Target LDAP server coordinates
268 | JAVA_OPTS="$JAVA_OPTS -Dfortress.admin.user=uid=admin,ou=system -Dfortress.admin.pw=secret -Dfortress.c
269 |
270 | # Uncomment the following line to make the umask available when using the
271 | # org.apache.catalina.security.SecurityListener
272 | #JAVA_OPTS="$JAVA_OPTS -Dorg.apache.catalina.security.SecurityListener.UMASK='umask'"
273 |

```

## Start the Tomcat Server

N.B.: To start Tomcat as a service, run `service.bat` install in the Tomcat/bin directory. This sample installation will be configured to start manually:

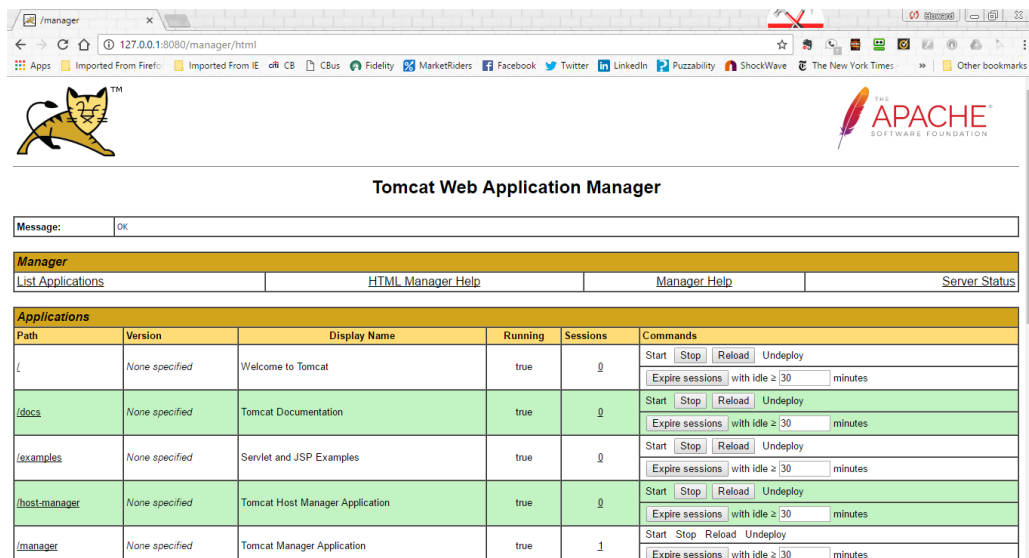
Go to the Tomcat directory and run:

```
.../Apache Tomcat/bin  
$ ./catalina.sh start
```

To stop

```
$ ./catalina.sh stop
```

To manage the running server go to: <http://127.0.0.1:8080/manager/html>:



The screenshot shows the Tomcat Web Application Manager interface in a web browser. The browser address bar shows `127.0.0.1:8080/manager/html`. The page features the Tomcat logo (a yellow cat) and the Apache Software Foundation logo. Below the logos, the title "Tomcat Web Application Manager" is displayed. A message box shows "Message: OK". The main content area is divided into sections: "Manager" with links for "List Applications", "HTML Manager Help", "Manager Help", and "Server Status"; and "Applications" which contains a table of running applications.

Path	Version	Display Name	Running	Sessions	Commands
/	None specified	Welcome to Tomcat	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/docs	None specified	Tomcat Documentation	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/examples	None specified	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/host-manager	None specified	Tomcat Host Manager Application	true	0	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes
/manager	None specified	Tomcat Manager Application	true	1	Start Stop Reload Undeploy Expire sessions with idle ≥ 30 minutes

## Setup Apache Fortress REST Application

Build, Perform Fortress REST Test Policy Load and Deploy to Tomcat:

Execute the following:

```
mvn clean install -Dload.file=./src/main/resources/FortressRestServerPolicy.xml tomcat:deploy
```

If necessary to rerun due to deployment error, then Redeploy:

```
mvn tomcat:redeploy
```

## Run Smoke test

```
mvn test -Dtest=EmTest
```

## Set Up Fortress Web

Download and unzip the Fortress Web package:

```
wget http://www.apache.org/dist/directory/fortress/dist/2.0.0-RC1/fortress-web-2.0.0-RC1-source-release.zip
unzip fortress-web-2.0.0-RC1-source-release.zip
cd fortress-web-2.0.0-RC1
```

Copy the config file from the fortress-core directory:

```
cp ../[FORTRESS-CORE-HOME]/config/fortress.properties src/main/resources
```

Build Fortress Web, perform Fortress Web test policy load and deploy to Tomcat:

```
mvn clean install -Dload.file=./src/main/resources/FortressWebDemoUsers.xml tomcat:deploy
```

If necessary to rerun due to deployment error, then Redeploy:

```
mvn tomcat:redeploy
```

## Open browser and test Fortress Manager

Go to <http://hostname:8080/fortress-web> (Credentials are UID: **test** and PW: **password**)

Click on the links, to pull up various views on the data stored in the directory.

## Run Selenium Web Driver Integration Test

These tests have the following prerequisites:

- Either Firefox or Chrome installed to target machine.
- FORTRESS\_CORE\_HOME/FortressJUnitTest successfully run, which will load some sample data to play with.
- [FortressWebDemoUsers](./src/main/resources/FortressWebDemoUsers.xml) policy loaded into target LDAP server.

Execute the following to test with Firefox, which is the default:

```
mvn test -Dtest=FortressWebSeleniumITCase
```

Repeat the test for Chrome:

```
mvn test -Dtest=FortressWebSeleniumITCase -Dweb.driver=chrome
```

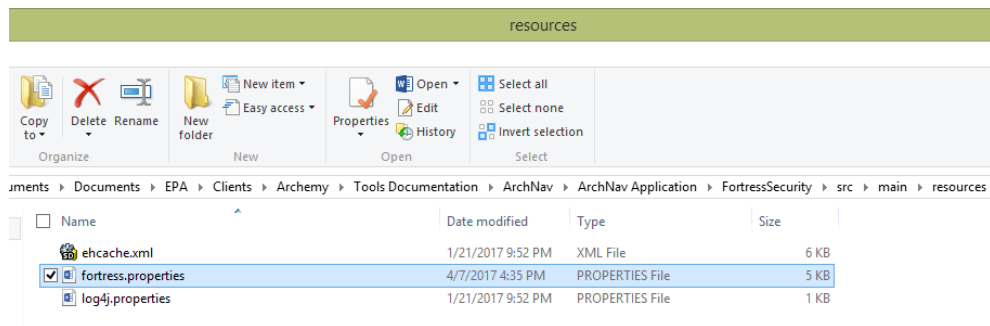
## Build and deploy the ArchNav security application

Copy the fortress.properties file from fortress-core/config to .. /ArchNav Application/FortressSecurity:

From within the .. /ArchNav Application/FortressSecurity execute the following:

```
cp . . . /fortress-core-2.0.0-RC1/config/fortress.properties src/main/resources
```

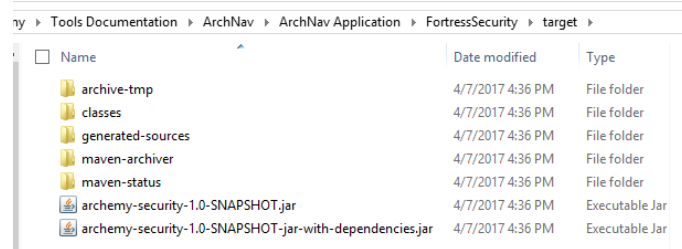
In the Windows File Manager, this is the target file:



Install:

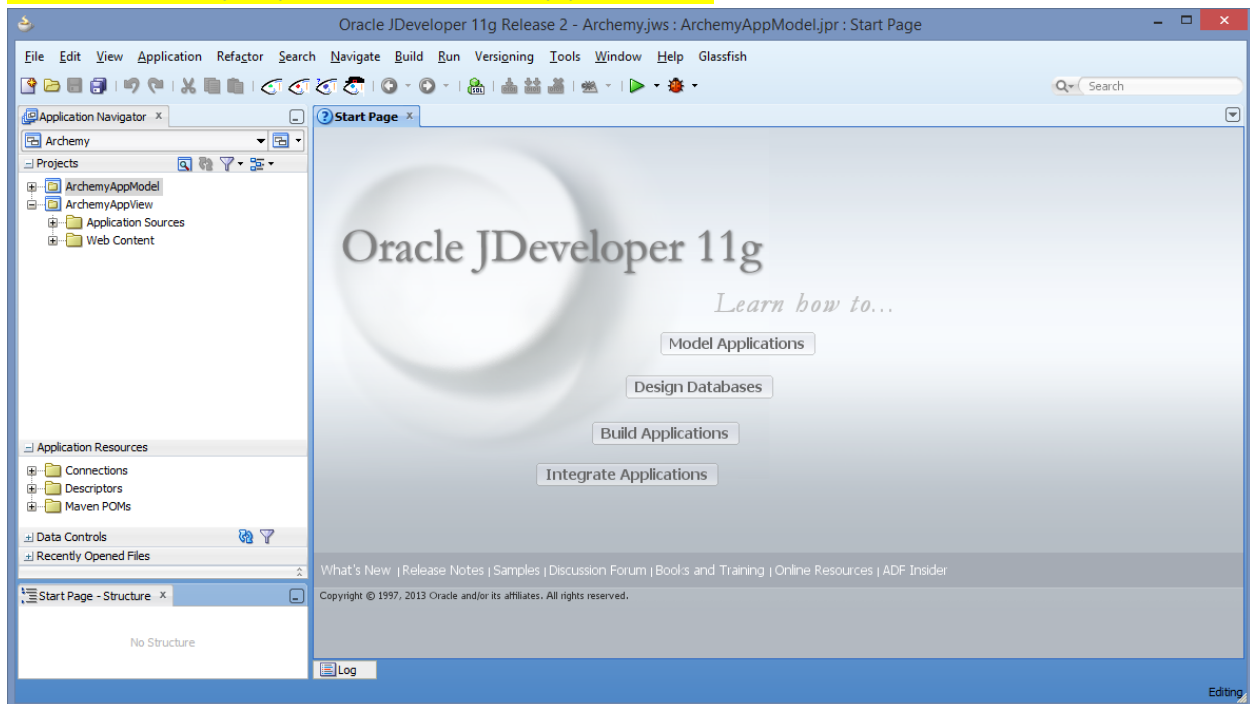
```
mvn clean install
```

The .jar files, shown below, should be created in the /FortressSecurity/target directory:



Copy the ... with-dependencies.jar to C:\glassfish3\glassfish\domains\domain1\lib

## Build and deploy the ArchNav application



# Configure Fortress to include ArchNav authentication and RBAC details

## Open Browser and Load Fortress Manager

- a. Go to [the Fortress Management panel](#) (Credentials are UID: test and PW:password).
  - a. N.B., the Fortress app already contains a quantity of demo and sample data. You can just ignore it.

## Create and Edit Fortress Permission Objects and Assign Permissions

1. Create Admin and Normal User Roles:
  - a. Click ADMRLES

Name	Description	Begin Date	End Date	Begin Lock	End Lock	Dt Begin Tm	End Tm	Day
Admin	Archemy Admin Roles							
fortress-core-super-a	Fortress Super User	none	none	none	none	0000	0000	all
fortress-web-audit-ad	Fortress Auditor	none	none	none	none	0000	0000	all
fortress-web-user-ad	Fortress User Admin	none	none	none	none	0000	0000	all
oamAdmin1	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin10	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin2	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin3	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin4	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin5	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin6	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234
oamAdmin7	Test Case TR1	20090101	21000101	20500101	20500115	0000	0000	1234

- b. Enter the role name **Admin** and the description **Archemy Admin Roles** in the form on the right.
- c. Click **Add** and the admin console will add the roles, display them in the list on the left and display the internal ID in the form on the right.
- d. Click **ROLES**

Name	Description	Begin Date	End Date	Begin Lock	End Lock	Dt Begin Tm	End Tm	Day
fortress-web-group-a	Access User, Group, Audit and PW Policy P							
NormalUser	Archemy Normal User Roles							
fortress-web-super-u	Role to access Fortress Web pages and fu							
oamDSDR1	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR10	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR11	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR12	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR13	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR14	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR15	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	
oamDSDR16	Test Case TR8	20090101	21000101	20500101	20500115	0000	0000	

- e. Enter the role name **NormalUser** and the description **Archemy Normal User Roles**.
- f. Click **Add** and the admin console will add the roles, display them in the list on the left and display the internal ID in the form on the right.



## 2. Create Administrative Permission Objects

### a. Click **ADMOBJS**

**Program Links**  
USERS ROLES POBJS PERMS SSDS DSDS OUSERS OUPRMS ADMRLES **ADMOBJS** ADMPERMS LOGOUT

**Administrative Permission Object Page**

Permission Object Search Operations:  ☒ Object Name ☐ Perm Organization

Nav Panel: USERS, ROLES, POBJS, PERMS, SSDS, DSDS, OUSER, OUPRM, **ADMRLE**

Object Name	Perm Organization	Description
AROBJ2_1	APP1	Test Case AROBJ_2
AROBJ2_2	APP1	Test Case AROBJ_2
AROBJ2_3	APP1	Test Case AROBJ_2
AROBJ2_4	APP1	Test Case AROBJ_2
AROBJ2_5	APP1	Test Case AROBJ_2
customer-info	default	Archemy Customer Info Permission Object for Admins
DelAdminMgr	APP1	ARBAC02 policies
manage-areas	default	Archemy Manage Areas Permission Object for Admins
manage-bus-probs	default	Archemy Manage Business Problems Permission Object for Admins
manage-dimensions	default	Archemy Manage Dimensions Permission Object for Admins
manage-domains	default	Archemy Manage Domains Permission Object for Admins
org.apache.directory.fortress.core.impl.AccessMgrIn	default	Access Manager Policies
org.apache.directory.fortress.core.impl.AdminMgrIn	default	RBAC admin policies
org.apache.directory.fortress.core.impl.AuditMgrIn	default	RBAC audit review
org.apache.directory.fortress.core.impl.DelAcMgrIn	default	Delegated Access Manager Policies
org.apache.directory.fortress.core.impl.DelReMgrIn	default	ARBAC02 admin policies
org.apache.directory.fortress.core.impl.GroupMgrIn	default	ARBAC review policies
org.apache.directory.fortress.core.impl.PwPoMgrIn	default	LDAP Group admin policies
org.apache.directory.fortress.core.impl.PwPoMgrIn	default	Password policies

Detail Operations:

**Administrative Permission Object Detail**

Object Name:   
Description:   
Perm Organization:   
Type:   
Internal ID:

### b. Add the following four permission objects:

Object Name	Perm Organization	Description
manage-areas	default	Archemy Manage Areas Permission Object for Admins
manage-dimensions	default	Archemy Manage Dimensions Permission Object for Admins
manage-domains	default	Archemy Manage Domains Permission Object for Admins
manage-bus-probs	default	Archemy Manage Business Problems Permission Object for Admins

## 3. Create Administrative Permissions

### a. Click **ADMPERMS**

### b. Locate the entries for the administrative objects created in the previous step.

**Program Links**  
USERS ROLES POBJS PERMS SSDS DSDS OUSERS OUPRMS ADMRLES **ADMOBJS** **ADMPERMS** LOGOUT

**Administrative Permission Operation Page**

Nav Panel: USERS, ROLES, POBJS, PERMS, SSDS, DSDS, OUSER, OUPRM

Object Name	Perm Organization	Description
DelAdminMgr		grantPermission
DelAdminMgr		revokePermission
DelAdminMgr		updateAdminObject
DelAdminMgr		updateOrgUnit
DelAdminMgr		updatePermObj
DelAdminMgr		updateRole
manage-areas	View	Archemy Admins Operation Name for Manage
manage-bus-probs	View	Archemy Admins Operation Name for Manage
manage-dimensions	View	Archemy Admins Operation Name for Manage
manage-domains	View	Archemy Admins Operation Name for Manage
org.apache.directory.fortress.core.impl.AccessMgrIn	authorizedRoles	
org.apache.directory.fortress.core.impl.AccessMgrIn	checkAccess	
org.apache.directory.fortress.core.impl.AccessMgrIn	sessionPermissions	
org.apache.directory.fortress.core.impl.AccessMgrIn	sessionRoles	
org.apache.directory.fortress.core.impl.AdminMgrIn	addAscendant	
org.apache.directory.fortress.core.impl.AdminMgrIn	addDescendant	
org.apache.directory.fortress.core.impl.AdminMgrIn	addDsRoleMember	
org.apache.directory.fortress.core.impl.AdminMgrIn	addInheritance	
org.apache.directory.fortress.core.impl.AdminMgrIn	addPermission	
org.apache.directory.fortress.core.impl.AdminMgrIn	addPermissionAttribute	
org.apache.directory.fortress.core.impl.AdminMgrIn	addPermissionAttribute	

Detail Operations:

**Administrative Permission Operation Detail**

Object Name:   
Operation Name:   
Object ID:   
Description:   
Internal ID:   
Roles:

- c. Click on and update each in turn.

Object Name	Operation Name	Description
manage-areas	View	Archemy Admins Operation Name for Manage Areas
manage-dimensions	View	Archemy Admins Operation Name for Manage Dimensions
manage-domains	View	Archemy Admins Operation Name for Manage Domains
manage-bus-probs	View	Archemy Admins Operation Name for Manage Business Problems

- d. Click **COMMIT** after each to update.

#### 4. Create Normal User Permission Objects

- a. Click **POBJS**

The screenshot displays the 'Permission Object Page' in the Archemy system. The top navigation bar includes links for Program Links, USERS, ROLES, POBJS, PERMS, SSDS, DSDS, OUSERS, OUPRMS, ADMRLS, ADMOBS, ADMPERMS, and LOGOUT. The main content area is titled 'Permission Object Page' and features a search bar with a 'search' button and radio buttons for 'Object Name' (selected) and 'Perm Organization'. Below the search bar is a table listing permission objects. The table has three columns: Object Name, Perm Organization, and Description. The first two rows are highlighted in blue. To the right of the table is a 'Detail Operations' panel with buttons for 'add', 'commit', 'delete', and 'clear'. Below this is the 'RBAC Permission Object Detail' panel, which shows the details for the 'customer-profile' object, including its description, perm organization (default), type, and internal ID.

Object Name	Perm Organization	Description
customer-profile	default	Archemy Customer Profile Permission Object for Normal Users
register-kad-usage	default	Archemy Register KAD Usage Permission Object for Normal Users
TOB1_1	APP1	Test Case TOB1
TOB1_2	APP2	Test Case TOB1
TOB1_3	APP3	Test Case TOB1
TOB1_4	APP4	Test Case TOB1
TOB2_1	APP1	Test Case TOB2
TOB2_2	APP2	Test Case TOB2
TOB2_3	APP3	Test Case TOB2
TOB2_4	APP4	Test Case TOB2
TOB3_1	APP1	Test Case TOB3
TOB3_2	APP2	Test Case TOB3
TOB3_3	APP3	Test Case TOB3
TOB3_4	APP4	Test Case TOB3

**RBAC Permission Object Detail**

Object Name: customer-profile  
Description: Archemy Customer Profile Permission Object for Normal Users  
Perm Organization: default  
Type:   
Internal ID: da322ce1-e4a2-42db-8564-bd6e1c3f6618

- b. Create the objects shown below:

Object Name	Perm Organization	Description
customer-profile	default	Archemy Customer Profile Permission Object for Normal Users
register-kad-usage	default	Archemy Register KAD Usage Permission Object for Normal Users

## 5. Create Normal User Permissions

### a. Click **PERMS**

**Program Links**  
[USERS](#) [ROLES](#) [POBJS](#) [PERMS](#) [SSDS](#) [DSDS](#) [OUSERS](#) [OUPRMS](#) [ADMRLS](#) [ADMOBJS](#) [ADMPERMS](#) [LOGOUT](#)

**Permission Operation Page**

Permission Search Operations  
 Object Name  Operation Name

Object Name	Object Id	Operation Name	Description
customer-profile		View	Archemy Operation Name for Normal Users Customer Profile Permission Object
register-kad-usage		View	Archemy Operation Name for Normal Users Register KAD Usage Permission Object
TOB1_1	001	TOP1_1	TOP1 Updated
TOB1_1	010	TOP1_10	TOP1 Updated
TOB1_1	002	TOP1_2	TOP1 Updated
TOB1_1	003	TOP1_3	TOP1 Updated
TOB1_1	004	TOP1_4	TOP1 Updated
TOB1_1	005	TOP1_5	TOP1 Updated
TOB1_1	006	TOP1_6	TOP1 Updated
TOB1_1	007	TOP1_7	TOP1 Updated
TOB1_1	008	TOP1_8	TOP1 Updated
TOB1_1	009	TOP1_9	TOP1 Updated
TOB1_2	001	TOP1_1	TOP1 Updated

**Detail Operations**

**RBAC Permission Operation Detail**

Object Name

Operation Name

Object ID

Description

Internal ID

Roles

### b. Add permissions for both of the normal user objects:

Object Name	Operation Name	Description
customer-profile	View	Archemy Operation Name for Normal Users Customer Profile Permission Object
register-kad-usage	View	Archemy Operation Name for Normal Users Register KAD Usage Permission Object

## 6. Create Admin Permission Objects for Catalogue Add and Delete and View Cust Name Operations

### a. Using the ADMOBJS page, add the following objects:

Object Name	Perm Organization	Description
searchoraddcatalog	default	Archemy Admins Add Catalog Operation Name for Search and Add Catalog Permission Object
view-customer-name	default	Archemy Admins Operation Name for View Customer Name Permission Object

7. Create Admin Permissions for Catalogue Add and Delete and View Customer Name Operations

a. Using the ADMPERMS page, add the following permissions:

<b>Object Name</b>	<b>Operation Name</b>	<b>Description</b>
searchoraddcatalog	add-catalog	Archemy Admins Add Catalog Operation Name for Search and Add Catalog Permission Object
searchoraddcatalog	delete-catalog	Archemy Admins Delete Catalog Operation Name for Search and Add Catalog Permission Object
view-customer-name	View	Archemy Admins Operation Name for View Customer Name Permission Object

## Test ArchNav

Make sure the ApacheDS, Tomcat, Glassfish and MySQL servers are all running.

Invoke ArchNav by browsing to: <http://localhost:9999/archemy/faces/login.jspx>.

You should see the login page:

